FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

No. 29,153 Monday October 24 1983 D 8523 B

Small banks hold key to Brazil's new rescue deal, Page 21

NEWS SUMMARY

GENERAL

US Navy convoy nears Grenada

Caribbean leaders last night resumed discussions on possible sanctions against Grenada after last week's coup as a U.S. Navy convoy neared the island.

Military intervention was among the options being considered.

Radio Free Grenada, monitored in Barbados, said the island's militia was being mobilised "in view of the threat facing Grenada" and said an attack could materialise in the next few days.

The 15-ship convoy, to protect 1,000 American citizens, was expected to arrive last night, Radio Free Grenada said.

Iraq mines claim

Iraq claims to have mined the entrance to Bandar Khomeini, the north Iranian port east of Abadan, in a move which significantly escalates the Gulf war. Page 3

Huge peace demos

Over 2m people marched, sang, listened to speeches and formed human chains in a series of major demonstrations throughout Western Europe at the weekend against the imminent installation of cruise and Pershing nuclear missiles by Nato. Page 20

Kidnap charge

A gunman who burst into the Augusta National Golf Club while President Ronald Reagan was playing on the course was charged with kidnapping and with threatening the President's life. The gunman was alleged to have taken several hostages but freed them. The President was not touched.

Queensland poll

Veteran right-winger Joh Bjelke-Petersen claimed that his re-election in Queensland was a turning point against socialism in Australia. His National Party was returned to power in a state poll on Saturday in which the Liberal Party was decimated and Labor failed to win the support it had expected. Page 3

Pakistan arrests

Pakistan said more than 4,000 people were arrested across the country during the last 10 weeks of political agitation against martial law and 2,527 were *still* in jail.

Sikhs held

Indian security forces have arrested 70 suspected Sikh extremists in raids on hideouts in Punjab state following Friday's train derailment in which about 20 people were killed and 130 injured.

Rio jail stormed

Four hundred cab drivers stormed a suburban Rio de Janeiro jail in an effort to lynch six men who admitted murdering seven taxi drivers, Brazilian state police said.

Turkey warning

Martial law will continue in Turkey after the November 6 general election, President Kenan Evren warned.

Briefly...

Zimbabwe Opposition leader Joshua Nkomo is in Britain to complete his autobiography, his wife Johanna said.

Swiss general elections are likely to have resulted in only minor changes in the parliament's makeup.

Rod Dixon of New Zealand become the first non-American male runner to win the New York City marathon.

Racing: French filly Ma Biche won the Prix de la Forêt at Longchamp, Paris.

BUSINESS

Airline industry's finances improve

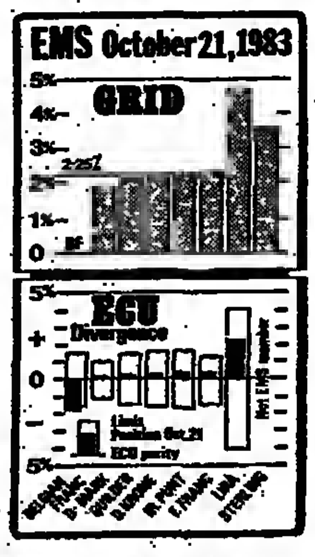
● **WORLD AIRLINE** industry's financial position is improving slowly and there is a possibility of reporting profits after 1985, International Air Transport Association director-general Knut Hammarskjöld said. The loss in 1983 will be \$1.2bn, which is likely to be cut to \$250m by 1985 with the prospect of profits thereafter. Page 20

● **NORTH SEA OIL:** Two groups of oil companies, one Norwegian, the other British, are engaged in a \$526m tug-of-war over oil reserves in the Murchison Field, which straddles the UK-Norwegian median line of the North Sea. Page 20

● **BELGIAN FRANC** continued to lose ground within the European Monetary System last week. It was placed well outside its alarm bell or divergence limit, reflecting a weaker trend in the U.S. dollar. This in turn encouraged further demand for the stronger EMS currencies, such as the D-Mark.

The French franc recorded a useful gain on the week, encouraged by latest trade figures which included the first trade surplus for over four years.

The Italian lira showed little change from the previous week and remained *the* strongest member of the system.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

● **MALAYSIA** has imposed a 0.1 per cent stamp duty on transactions between foreign and local stockbrokers to encourage foreign investors to deal directly with Malaysian brokers.

● **EEC** finance ministers are due to discuss today plans to develop the role of the Common Market's own currency and to export fewer Community savings.

● **IMF** managing director Jacques de Larosière is reported to have told Brazilian officials that the Government's latest austerity package must be approved by the Brazilian Congress before the IMF board meets on November 18 to discuss the resumption of lending to Brazil. Page 3

● **JAPAN** claimed that it had moved into the "realm of active import promotion" with its newly issued package of economic measures. Page 4

● **TURKEY** has been warned by international airlines that they regard charges for the newly opened terminal at Istanbul airport as unacceptable and will boycott it unless fees are lowered. Page 4

● **ALLIANZ** Versicherung, West Germany's largest insurance group, issued the *formal offer document* setting out the terms of its bid for Eagle Star Holdings, the UK insurance group. Page 26

Mass killing by Beirut suicide bombers threatens future of peace-keeping force

Reagan determined to find political settlement

BY REGINALD DALE, U.S. EDITOR, IN WASHINGTON

PRESIDENT Ronald Reagan described yesterday's Beirut killings as "bestial" in nature, but made it clear that the massacre of the marines made *him* more determined than ever to keep U.S. forces in Lebanon to try to end the fighting and reach a political settlement.

The U.S. sense of outrage was shared by other Western leaders. M Claude Cheysson, the French Foreign Minister attending an EEC meeting outside Athens strongly hinted that France is reconsidering its participation in the multinational peace-keeping force.

From Paris, M Charles Hernu, the Defence Minister, was last night dispatched to Beirut along with General Jeannou Lacaze, the chief of staff of the French armed forces.

Mrs Margaret Thatcher, the British Prime Minister, in condemning the killings sent messages of condolence to President Reagan and President François Mitterrand. The *British Government viewed the killings* as a provocative act and indicated it would keep its token 98 man force in the Lebanon.

The Italian Government said it was looking at ways of redeploying its force of more than 2,000 men more safely, although it confirmed it would keep the troops in Lebanon. It will, however, look again at the request for a fresh batch of 400 troops to monitor the ceasefire.

As Mr Reagan convened an emergency meeting of his top national security advisers at the White House, Mr Caspar Weinberger, the Defence Secretary, said there had been no change in U.S. goals and commitments in Lebanon or in the mission of the marines.

Mr Reagan ordered marines to fly from North Carolina to replace those killed and wounded in the attack, and the Pentagon said that a naval force carrying another 2,000 marines would steam straight from the Caribbean to the Eastern Mediterranean.

The force, originally intended to relieve those marines now in Beirut, had been diverted to protect U.S. citizens in Grenada against political upheaval on the island if necessary.

Mr Weinberger said there would be *no pull-out* of the *1,600-strong* marine force in Beirut, but he also appeared to rule out any increase in its numbers. The high-level discussions in Washington centred on decreasing the marines' vulnerability, he said.

The U.S. could not simply "walk away" and leave the Middle East to terrorism, Mr Weinberger said. On the other hand, he did not think that sending in more marines would help them perform their peace-keeping mission.

Mr Weinberger said that while investigations were continuing into who was responsible for the bombings, there was much "circumstantial evidence" that pointed to Iran, which has also been suspected of involvement in the attack on the U.S. embassy in Beirut earlier this year.

Mr Weinberger said he would not rule out some involvement by the Soviet Union, which has 7,000 military advisers and personnel in Syria, and which, in the Administration's view, is also interested in fomenting instability in the region.

As consultations continued with the other peace-keeping force countries – France, Italy and Britain – Mr George Shulz, the Secretary of State, announced that he was postponing a trip to Brazil and El Salvador, *for which he had planned* to leave Washington today.

Mr Reagan cut short a golfing weekend in Georgia to confront what was clearly both a serious Middle Eastern and domestic political crisis. Critics of Mr Reagan's policies have for many months warned that the marine deployment at Beirut airport makes them "sitting ducks."

Democrats bitterly condemned Mr Reagan and his policies as responsible for the marines' deaths, and renewed their accusations that he had violated the War Powers Act by subjecting the marines to hostilities without full Congressional approval.

Mr Reagan now faces a number of serious dilemmas in reacting to the crisis. Pressure was already mounting yesterday for the marines to be brought home, and will undoubtedly grow.

But Mr Reagan cannot pull them out without acknowledging the *collapse of his entire Middle East* peace policy and sending a signal of American weakness around the world.

If the marines are to remain in Beirut, there will at the very least be demands for a reassessment of their objectives and of the policy that they are there to try to enforce.

Urgent consideration will now be given to further steps to secure the marines' defences, perhaps by changing their positions.

Peace-keeping gives way to power broking, Page 2

More than 140 troops die in bomb blasts

BY PATRICK COCKBURN IN LONDON

TWO BOMBS killed 135 U.S. Marines and at least 5 French paratroopers in a devastating attack on the 5,400-strong multinational force in Beirut yesterday.

The heavy casualties put in doubt the future American and French role in Lebanon and emphasise the danger to the foreign contingents caught up in Lebanon's long-running civil war.

The attack on the marines came early in the morning when a large red truck approached the marine positions in buildings around Beirut international airport. The truck burst through a gate and two barricades to enter a building where the driver detonated some 2,000 pounds of explosives.

Mr Amin Gemayel

The four-storey building collapsed on top of the sleeping marines. Attempts to dig out bodies and find survivors yesterday were *hampered by intermittent sniper* fire from the nearby Moslem suburbs of south Beirut.

At the same time as the attack on the marines a truck was driven into the underground garage of a building two kilometres away housing 110 French paratroopers. The explosion destroyed the block leaving five soldiers dead, 15 wounded and 53 missing, most of whom are likely to have been killed.

The two attacks follow a week in which there have been steadily escalating attacks against the 1,200-strong U.S. contingent in the multinational force as well as the 2,050 Frenchmen. Since the force arrived in September last year six marines and 17 French soldiers have died in attacks.

The danger to the multinational force has grown primarily because of the increased U.S. support for the Lebanese Government. In fighting against Druze militiamen in September U.S. naval vessels offshore gave direct fire support to the Lebanese army.

Many Lebanese opposed to the Government of President Amin Gemayel see *his survival* as dependent on military support from the U.S. This has increased the chances that an anti-government group would strike at the marines and other members of the multinational force.

Yesterday's attacks are similar to the car bomb attacks which destroyed the U.S. embassy in Beirut in April leaving 60 dead and the Iraqi embassy several years ago. In both cases a vehicle was driven close to or into the building by a driver who detonated the explosives and killed himself along with his victims.

The fact that the attacks were *suicide missions* of this kind is being taken in Beirut as evidence that groups under Iranian influence are reponsible.

This does not necessarily mean that Tehran planned the attacks. Groups belonging to the Shia Moslem sect, the largest in Lebanon, some 600,000 of whose members are packed into slums close to American and French positions, are capable of organising the car bombs on their own initiative.

The U.S. has blamed Syria for being behind recent attacks on the marines and apparently believes Damascus had some involvement in blowing up the U.S. embassy in April. Diplomats were already emphasing that the degree of violence involved in a Lebanese ceasefire was politically unacceptable to Washington.

The killing of more than 10 per cent of the U.S. marine force in Lebanon yesterday will further underline Washington's unwillingness to allow the present situation to continue.

The Italian and British contingents in the multinational force are in *somewhat safer position* than the Americans and French. The 2,050 Italian soldiers have always emphasised that they have a purely peace-keeping role which they underline by painting their military vehicles white.

Their troops are stationed in a very sensitive heavily populated area of south Beirut, including Chatilla, where 900 Palestinians were massacred by Christian militiamen last year.

Car producers condemn EEC move on prices

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT, IN LONDON

THE EUROPEAN motor industry today begins a desperate battle to prevent the EEC Commission imposing on it a regulation which would result in closer tax-free prices on new cars within the Community.

Complaints about the high price of cars in Britain led to the Commission's action. But the European *manufacturers as a body today* unanimously condemn the proposals in the industry's reply to a draft regulation produced by the Commission.

The regulation would allow unofficial traders to enter the market and undercut the official dealer networks if there was more than a 12 per cent difference in any manufacturer's prices between one EEC country and another. Commercial vehicles as well as cars would be covered by the regulation.

In spite of the industry's protests, Mr Frans Andriessen, the Commissioner responsible for competition policy, could put the regulation into effect without reference to the EEC Parliament or to individual national *governments*.

But the industry hopes to mobilise public opinion and convince the governments of Britain, West Germany and France in particular that pressure should be brought to bear on the Commission to prevent the regulation being put into operation.

"We believe the Commission is certainly exceeding its legal powers," said Mr Anthony Fraser, director of the UK Society of Motor Manufacturers and Traders, at the weekend. "But we don't want the hassle of taking the Commission to court. We are hoping enough governments will put pressure on the Commission and say that price controls are their responsibility – not the Commission's."

Apart from the so-called "12 per cent clause," the manufacturers also object to another which would insist that manufacturers must supply any dealer who demands a vehicle with a foreign specification at his local price.

This would result in the lowest price in any EEC country becoming the guide price for the EEC as a whole and the one from which the 12 per cent differential would apply.

The Commission argues that the motor industry has the most restrictive distribution system in Eu*rope – with the blessing* of the *Com*mission. But it is inconceivable that the system could be allowed to continue if there were major price differences between markets.

In their reply today, the manufacturers maintain that the regulation would encourage into the business unofficial traders, with no commitment to service, warranty work or the stocking of slow-moving spare parts.

"It would undermine vehicle distribution and servicing to such a degree that the manufacurers' estab-

Continued on Page 20

Nissan's race for the world, Page 18

Tel Aviv exchange to reopen

By David Lennon in Tel Aviv

THE TEL Aviv Stock Exchange resumes full trading today after a *two-week closure imposed to* prevent a collapse of bank shares. With the Government now guaranteeing a base price for the shares, the banks hope that the run on their shares early this month will not be repeated.

The Government and the banks have conducted a vigorous campaign in the past few days to restore confidence and to persuade the public not to dump their bank shares. There was no immediate sign of any heavy selling orders being submitted yesterday in anticipation of renewed trading today.

Under the rescue agreement, the Government has undertaken

Continued on Page 20

Bank of Italy governor urges incomes policy to cut inflation

BY JAMES BUXTON IN VENICE

THE ITALIAN Government must implement a comprehensive incomes policy if it is to achieve its aim of getting inflation down to an average of 10 per cent next year, Dr Carlo Azeglio Ciampi, governor of the Bank of Italy, warned yesterday.

A single digit inflation rate was within reach for the first time in more than a decade, the central bank governor said. But he added, "If corrective measures are not taken rapidly, we run the risk of squandering tha results laboriously obtained so far."

This would mean "unhitching Italy from the recovery in world demand, protracting the already over-long period of stagnation and inflation and with a weakened economy, having to tackle the same problems in a more acute form tomorrow."

Dr Ciampi, who was making the central bank governor's traditional autumn keynote address to Italian *foreign exchange dealers* in Venice, said the reduction in inflation could only be achieved if tha Government of Sig Bettino Craxi kept to its stated budget aim of holding down public sector borrowing, and if it implemented an incomes policy.

An incomes policy is in the Government's programme, but has not yet been put into effect.

Dr Ciampi said a comprehensive incomes policy meant keeping all rises in wages, rents and state-administered prices within next year's target inflation rate of *10 per cent*. The Government should operate the policy "by making use of fiscal and para-fiscal instruments, and calling for the necessary collaboration."

The central bank is known to want the Government to secure union collaboration in further reducing the application of the *scala mobile* (sliding scale) wage indexation system, although Dr Ciampi did not mention this.

Inflation in September was 13.6 per cent, but will average 15 per cent for the whole year, against a target of 13 per cent. To achieve an average of 10 per cent next year the rate would have to drop to 8 per cent by the end of 1984, Dr Ciampi said.

Dr Ciampi criticised the Government, which came to power in August, for having already abandoned its original intention of keeping both this year's and next year's public sector borrowing requirements to L80,000bn (\$50bn) and settling instead for targets of L90,000bn for both years. Because 60 per cent of the Government's debt is short-term, a fall in inflation would bring an immediate drop in the cost of servicing it.

The governor warned that unless the Government introduced an incomes policy and made sure its budget was passed by parliament, there could be no easing of the "highly restrictive" monetary policy which the central bank is practising.

He revealed that, thanks largely to the central bank's monetary policy, Italy's current account balance of payments deficit was only L12,000bn in the first half of this year and would be about the same figure for the whole year, against a deficit of L7,400bn in 1982.

CONTENTS

CRISIS IN LEBANON

Peace keeping gives way to power broking

BY PATRICK COCKBURN

EVEN before two bombs killed 120 U.S. marines and possibly up to 70 French soldiers, the 5,400-strong multinational force in Lebanon was in an increasingly dangerous and ambiguous position.

It eotered the country as a peace keeping force last year after the massacre of 900 Palestinians at Chatilla, but as the mooths passed its role changed to that of a military allv of the Lebanese Government.

Wneo Druze militiamen backed by Syrian artillery assaulted the Lebanese army positions in the town of Souq al-Gharb on the ridges above Beirut last September they were beld off by U.S. naval artillery. The U.S. announced that any threat to the security of Beirut endangered American persoooel and they would respond militarily.

Fraoce aod Italy, each with about 2,050 men in the multinational force, and the small 100-strong British detachment, tried to distinguish their position from that of America. They said they were atill a peace-keeping force. The Italians have painted all their military vehicles white like the UN troops in south Lebanon.

Bot for maoy Lebanese the multinational force had simply become an ally to the Government of Mr Amin Gemayel. The Freoch, historically the imperial power in Lebanon, and the U.S. marines bave come under constant sniping and rocket attack.

The White House never seemed to appreciate the vulnerability of the U.S. forces in Lebanon despite the blowing up of the U.S. embassy in April.

The same technique of a van loaded with explosives driven up to the entrance of the building was used as that employed yesterday.

The high point of U.S. success was a month ago when the ceasefire between Government and Druze forces was signed. Since then there have been continuous attacks on marine positions and convoys.

> It is unlikely that the perpetrators, hidden in the tangled and savage undergrowth of Lebanese politics, will ever be identified

Syria may bave been ultimately behind this pressure but the attacks were carried out from the vast slums which form the southern suburbs of Beirut.

They are inhabiled almost entirely by some 600,000 members of the Sbiah sect, whose militia control the streets. The army bas never entered the suburbs where Amal, led by Mr Nablb Berri, is the main political and military gronping.

It is unlikely that Amal carried out yesterday's attack but there are other militia groups in the Shiah areas with strong links to Iran and Syria.

Ayatollah Khomeini's picture can often be seen on walls and the suicide mission attack with a car bomb usually means that the group responsible is influenced by the Iranien revolution's ideal of martyrdom.

Pro-Iranian groups also have an additional reason for attacking the French since France is Iraq's main western ally in its war with Iran. Several years ago the Iraqi embassy in Beirut was completely destroyed by a car bomb similar to yesterday.

The U.S. marines are i a militarily vulnereble position. Stationed around the international airport their positions are overlooked by Druze and Syrian artillery in the mountains which rise from the outskirts of the capital. They are also very close to militant Shiah suburbs such as Bourj al-Barajneh.

A month ago I sat with two Amal gunmen who were cleaning their machine guns in a ruined bouse a hundred yards from a marine battery. The long barrels of 155mm artillery stood out clearly against the sky on the other side of somebody's vegetable garden.

It would be easy for the local militiamen to lob mortar rounds and rockets at the marines and cause casualties. It would also be difficult for the U.S. to respond without causing massive civilian casualties in the densely packed slums and inviting a tougher response from the local militias.

The temptation for President Reagan is wholly to blame the Syrians for the death of the marines. This, at least, has the virtue of simplicity but it is unlikely that the identity of the perpetrators in the tangled and savage undergrowth of Lebanese politics will ever be clearly identified.

The bombing does make clear that President Reagan, in an election year, is at the mercy of events in the most violent country in the world.

The 179th ceasefire in Lebanon since 1975, this one arranged by Mr Robert McFarlane, the new National Security Advisor, is turning out to be much like previous efforts to bring peace to Lebanon.

France may withdraw troops, hints Cheysson

BY PAUL BETTS IN PARIS

M. CLAUDE CHEYSSON, France's Foreign Minister, hinted strongly yesterday that France is reconsidering its participation in the multinational peacekeeping force in Beirut following the heavy loss of French and American lives in yesterday's bombings.

"It is not just painful but awful. It is mad," he said, clearly upset by the early morning news from Lebanon which stunned and angered an informal meeting of EEC foreign ministers at Vauliagenni, a seaside resort in Greece.

Asked if French forces may now be pulled out of Lebanon the French Minister said that their military mission bad been accomplished now that the Lebanese Army had shown "its efficacy." "When we are attacked we can ask if our military force is still necessary," added M Cheysson.

France sent its top defence officials to Beirut yesterday. M Charles Hernu, the French Defence Minister, and General Jeannou Lecaze, the chief of staff of the French armed forces, left Paris after consultations with President Francois Mitterrand yesterday.

The latest and by far most serious attack against the peace-keeping force is expected to put even greater pressure on the Governmeot to pull French troops eut of Beirut.

So far, however, the French government is not expected to reconsider its current position in the Lebanon. No official comment about the future of the French forces in the Lebanon was made yesterday.

Presideot Mitterrand and the Socialists have come under pressure from the French Communist Party, the junior partner in the French Left-wing coalition government, to pull out troops both from the Lebanon and Chad.

Moreover, French involvement in the Lebanon and Central Africa have caused increasing public criticism in France despite repeated commitments by the Government of the peace-keeping nature of the French military involvement in the two countries.

The attack against the French forces in Beirut was condemned by M Pierre Mauroy, the Prime Minister, yesterday as a "hideous and cowardly attack against France and against peace."

France currently has about 2,000 soldiers in Lebanon

Craxi reaffirms commitment

By Our Rome Correspondent

SIG BETTINO CRAXI, the Italian Prime Minister, yesterday reaffirmed Italy's peace-keeping commitment in Lebanon in messages of condolence and solidarity sent to Presidents Reagan and Mitterand.

Nevertheless, the deaths of the U.S. and French troops have raised a question mark over the future of the 2,000-strong Italian contingent to the multi national force and may also make the proposed sending of 400 Italian troops to act as observers between Druze and Christian forces in the Chouf mountains more difficult.

'Despicable crime'

Mr Yitzhak Shamir, the Israeli Prime Minister, described the bombings as a "despicable crime" that was undoubtedly perpetrated by those who oppose a peaceful solution in Lebanon, David Lennon writes from Tel Aviv.

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Britain will resist calls to bring home Beirut force

BY ROBERT GRAHAM

THE BRITISH Government regards the terrorist outrages against the French and U.S. peace-keeping force in Lebanon as a deliberate provocation. It is expected to resist domestic pressure to reconsider unilaterally Britain's small commitment to the multi-national contingent there. Britain bas 97 troops seconded to the peace-keeping force, all stationed in the capital, Beirut.

Yesterday, Mrs Margaret Thatcher, the Prime Minister, sent messages of condolence to President Reagan and to Franee's President Mitterrand. Sir Geoffrey Howe, the British Foreign Secretary, in Athens to attend an informal meeting of European Community foreign ministers, described the incidents as "hideously malevolent."

They served to underline the price the West is paying to try to promote "reconciliation and the restitution of effective government in Lebanon," said Sir Geoffrey.

He said the Europeans were nevertheless determined to go on playing a constructive role and that the extent of their current involvement demonstrated that "what is going on is not an exercise in U.S. imperialism."

At a press conference after President Mitterrand's visit to London last week, Mrs Thatcher said that Britain would only withdraw from the multinational peacekeeping force when a government of national reconciliation was established in Lebanon. This still appears to be official policy.

If France carries out its threat to withdraw, made yesterdav by M Claude Cheysson, the Foreign Minister, Britain could be in an awkward position. Britain, however, has tended to follow closely American policy on Lebanon and, so long as U.S. forces remain, Britain would probably follow suit.

The British continent is better protected than the U.S. marines and French Foreign Legion troops in Lebanon. They are in a compound surrounded by a large wall. The only place where a lorry can enter the car park is above the level of the road, and is protected by heavy metal gates.

Some 40 British troops were yesterday helping sift through wreckage near Beirut airport where the lorry packed with explosives was detonated inside the U.S. contingent's compound.

EEC stresses need for dialogue with Soviet Union

BY JOHN WYLES IN VOULIAGMENI

FOREIGN MINISTERS of the European Community yesterday responded to the weekend peace marches hy stressing their desire to maintain a potentially fruitful dialogue with the Soviet Union despite any setback caused by the deployment of intermediate range nuclear weapons in Europe.

Deployment of U.S. cruise and Pershing 2 missiles is not usually regarded as a suitable topic for discussion in EEC gatherings.

Ministers, however, spent considerable time at an informal meeting here in Greece assessing the Soviet position in the Geneva disarmament talks and speculating on the consequences of Moscow breaking off the talks nnce deployment begins in December.

Watching the peace protests building up to a crescendo of activity, several governments, including recently the British, have been laying new stress on their desire to continue a political dialogue with Moscow. The most visible expression of this was last weekend's eleventh-hour meeting in Vienna between Herr Hans Dietrich Genscher, West German Foreign Minister, and Mr Andrei Gromyko, his Soviet counterpart.

Herr Genscher'a account of the talks was said by one of his EEC colleagues to have been "masterly" and to have provided the basis for the conclusion that Moscow was beginning to recognise the failure of its tactics to stop deployment of cruise and Pershings.

"They are grasping the central point that INF deployment is taking place because Europe wants it and European Governments of varied kinds are firm in their commitment to it," said Sir Geoffrey Howe, the British Foreign Minister, at the end of the meeting at this Athenian seaside resort yesterday.

Foreign ministers concluded with apparent satisfaction that Moscow was beginning to realise that its hid had failed to use the missile issue to "decouple" Europe from the U.S.

Work may restart at Ford plant in Cork

BY BRENDAN KEENAN IN DUBLIN

THERE ARE hopes that redundant Dunlop workers will end their occupation of the company's Cork plant today thus allowing resumption of production at the nearby Ford plant, which has lost steam supplies because of the Dunlop occupation.

Dunlop workers voted 4-1 to accept a redundancy package from the company, even though it represented a small improvement of the original I£5m ($5.9m) for the 700 workers.

Dr Garret FitzGerald, the Irish Prime Minister, who revealed that Irish exports are now expected to increase by 12 per cent in volume this year, warned that damage had already been done to Ireland's investment image.

He pointed out that most of the export increase was due to foreign firms and that action which deterred foreign investment could threaten thousands of jobs.

The Dunlop action increased fears about the future of the Ford plant, which produces 80 Sierras per day and which has been closed for three weeks by the Dunlop dispute.

There have been a series of disputes over redundancy terms involving closed companies, but Irish employers' representatives suggest that a number of them involved plants like Dunlop which had many long-serving employes.

Caribbean talks on Grenada sanctions

By Hugh O'Shaughnessy in Port of Spain

COMMONWEALTH Caribbean heads of government yesterday discussed for the second day here the sorts of sanctions they might impose on the left-wing military government of Grenada following last Wednesday's massacre of scores of people, including Prime Minister Maurice Bishop, in St George's, the Grenadian capital.

As the Caribbean leaders met, a U.S. naval task force comprising over 10 ships steamed toward the island and one Royal Navy destroyer, HMS Antrim, and a support ship in the area stood by amid indications that a landing on Grenada was being considered.

The British and U.S. governments are worried about the safety of many hundreds of their nationals on the island. It is also no secret that both Whitehall and Washington would be happy to see the end of the 16-man revolutionary military council which ousted the Bishop government.

Caribbean leaders have been in close contact with Washington and London. Over the weekend Prime Minister Edward Seagar of Jamaica, Prime Minister Tom Adams of Barbados, and Prime Minister Eugenia Charles of Dominica held talks in Bridgetown with Mr Charles Gillespie, the U.S. Deputy assistant Secretary of State for Caribbean Affairs. British representatives were also reported to have been present at the discussion.

Caribbean leaders, while eager to take advantage nf widespread waves of revulsion against last week's killings, are relnctant tn back any Anglo-U.S. intervention, for fear of local criticism.

Robert Graham adds: The British deputy High Commissioner in Barbados, Mr David Montgomery, arrived over the weekend in Grenada to help Britain's only diplomatic representative on the island, Mr John Kelly.

The main task of Mr Montgomery is to ensure tha safety of the 250 British tourists and employees on the island following the overthrow of Mr Bishop.

Queensland Premier scores stunning victory

BY MICHAEL THOMPSON-NOEL IN SYDNEY

IN ONE of Australia's most remarkahle elections since the war, Mr Joh Bjelke-Petersen, the 73-year-old Premier of Queensland, scored a stunning personal victory in Saturday's state election.

With 80 per cent of the vote counted, it seems likely that Mr Bjelke-Petersen's ultra-conservative state National Party will win et least 40 seats in the 82-seat legislative assembly, against 36 previously, and may well govern alone.

Previously, it had ruled resource-rich Queensland in coalition with the Liberal Party, the vote for which fell dramatically on Saturday.

Mr Bjelke-Petersen — regarded as eccentric and autocratic, even by Australian parliamentary standards — claimed the National Party's success was a significant national setback for the Labor Party, and a personal reversal for Mr Bob Hawke, the Federal Prime Minister. It was the "biggest defeat he could ever dream he would suffer," claimed the Stata Premier.

However, the elections' real significance lay in the shattering blow it dealt to Liberal morale, and the suggestion of a realignment of power hetween tbe Liberal-National Party, whicb ruled nationally in coalition until Mr Hawke's general election success in March.

The swing to the National Party was almost 11 percentage points, giving it about 39 per cent of the vole. There was also a swing to the Labor Party of three percentage points giving it about 44 per ceot of the vole, and 34 seats against 25 previously.

The swing against the Liberals was an estimated 12 percentage points giving it a meagre 14 per cent of the vote cutting its strength from 20 seats to seven.

Mr Andrew Peacock, national leader of the Liberal Party, admitted "the result was a very grave setback."

Mr Hawke said in Canberra, tbat the swing of three percentage points to Labor had been "adequate" hut said the result's significant lay in Mr Bjelke-Petersen's routing of his former coalition partners. "He got them well and truly in his sights and did them like a dinner," seid the Prime Minister.

The break-up of the Queensland coalition of Liberal and National parties occurred originally 10 weeks ago wben Mr Terry White—subsequently elected Liberal leader—crossed the floor to vote witb the Opposition. The premier then sacked him from the Queensland Cabinet.

A bitter foe of socialism, Mr Bjelke-Petersen is bound to prove an increasingly troublesome thorn in the side of the Hawke Government in Canberra which in turn claims Queensland economy is deteriorating rapidly.

More than A$30bn (£18.3bn) of resource and infrastructural projects are under discussion or investigation in Queensland. They include 36 coalmines, four power stations, four coal handling ports and 10 major energy projects.

However, it is claimed Mr Bjelke-Petersen has chased a "resources rainbow" at tbe expense of balanced manufacturing expansion while companies such as MIM Holdings—Qneensland's biggest miner and Australia's third higgest company—are increasingly alarmed at the scale of state levies, taxes and royalties.

Iraq, Iran claims successes as war escalates

BY PATRICK COCKBURN

IRAQ claims to have mined the entrance to Banadar Khomeini, the northern Iraniao port east of Abadan, in a move which significantly escalates the Gulf war.

If mines have heen laid in significant numbers near Banadar Khomeini, the channel to the Iranian oil product port of Bandar Mashur, which uses the same waterway, will also be closed.

Banadar Khomeini is used infrequently hut there has been a continual flow of oil products, including jet fuel, into Iran via Bandar Mashur.

The miniog of Bandar Khomelni and Bandar Mashur may be a foretaste nf more aggressive moves by Iraq to impede the Iranian oil trade.

Iraq is holding off from nsing the five French Super Eteodard aircraft with Exocet missiles until after a debate in the United Nations Security Council on neutralising the Gulf.

Iran says that 95 people were killed and 428 wounded by Iraqi ground-to-ground rockets against Dezful and Masjed Suleyman, both cities in the Iranian oil province of Khuzestan.

Heavy fighting is also continuing as a result of tbe latest Iranian offensive against Iraqi positions around the garrison town of Penjwin. After initial Iranian success, the Iraqis say they have taken a strategic height overlooking Penjwin which is now in Iranian hands.

According to Iranian newspapers, their forces have taken a 25 mile-long salient of Iraqi territory which juts into Iran, and the town of Garmak further north in Iraqi Khurdistan.

The Iranian attack, codenamed Vsl Fajr Four, appears to be a limited assault to spread out Iraqi forces on the long border between the two countries: but Iraq has clearly reacted fiercely to the attack. The Iranians claim to have killed or wounded 4,300 Iraqis and to have taken 465 prisoners, while the Iraqis say that Iran has suffered equally heavy casualties.

Sikh extremists held in Punjab

By K. K. Sharma in New Delhi

SECURITY FORCES yesterday intensified operations in three major districts of Punjab State, where Sikh extremists have adopted terrorist tactics to draw ettention to their political and religious demands.

About 70 suspected extremists were arrested in weekend operations by paramilitary forces sent by the Indian Government to restore peace. The troubled state came under direct rule from New Delhi a fortnight ago following the killing of Hindus.

The operations are continuing following the discovery of arms dumps and the seizure of machine guns and rifles. But officials admit that much needs to be done before the "disturbed area" returns to normal.

Zia army clamps down on demonstrations in Sind

BY JOHN ELLIOTT IN HYDERABAD

VIOLENT DEMONSTRATIONS and other political protests in some key tronble areas of tha Pakistan province of Sind have been quelled hy tough army action, including the burning of bouses, during the past few days.

This firm reassertion of the authority of Pakistan's martial law regime after two months of nnrest has coincided with Presidenl Zia Ul-Haq implicitly rejecting the key demand of political activists.

In a weekend speech be refused to state the timing or form of promised elections and said be personally saw no scope in an Islamic State for a party system of government.

Tbe speech, made to Pakistan's nominated National Council, the Majlis-I-Shoora, follows talks between President Zia and hrosdly sympathetic minority political parties.

Leaders of the Movement for the Restoration of Democracy, which has been the prime mover behind the two months of often violent nnrest, are refusing to join the talks until political prisoners are freed.

Pirs Makhadoom of Hala, one of Sind's prominent religious leaders and a senior figure in the democracy movement said General Zia was trying "to fool the people." He warned that they would react against the President's rigid stance.

Turkish martial law to continue

By David Barchard in Ankara

MARTIAL LAW will continue in Turkey after the November 6 general election, warned President Kenan Evren this weekend. He said that despite rumours that martial law would be lifted, it was still needed to root out "nests of traitors."

Martial law has been in force in the major Turkish cities since December, 1978, and throughout the whole country since the military takeover in 1980. The present general elections are the first to be held nnder martial law.

The first spark of excitement in what bas been a virtually lifeless election campaign came at the weekend when leaders of the three parties met for a two-hour television discussion.

Brasilia must support austerity plan, says IMF

By Andrew Whitley in Rio de Janeiro

M JACQUES DE LAROSIERE, the IMF managing director, is reported to have told Brazilian officials that the Government's latest austerity package must be approved by Congress before the IMF board meets on November 18 to discuss the resumption of lending to Brazil.

Last Wednesday night the Opposition-dominated Chamber of Deputies, the Lower House of Congress, overwhelmingly rejected the major plank of the Brazilian Government's legislation to meet IMF targets.

Putting a hrave face on their defeat, the authorities are now trying to negotiate the support of two small Opposition parties for their latest proposals which include a severe containment of wage rises. The main Opposition party, the PMDB, has already indicated its rejection.

Sr Ernane Galveas, the Finance Minister, was reported yesterday to have attempted to resign last Wednesday—disheartened by Congress's resistance and by indications that inflation in Brazil is continuing to climb.

According to yesterday's Jornal do Brasil, a leading daily, the Finance Minister made his decision after a gruelling telephone conversation with Mr de Larosiere. Sr Galveas was persuaded by Sr Antonio Delfim Netto, Brazil's economic overlord, to stay at his post.

WORLD TRADE NEWS

U.S. VOICES CONCERN OVER GROWTH OF IMPORTS

'Unfair' aid for EEC wine industry

BY NANCY DUNNE IN WASHINGTON

THE EEC wine industry has achieved an expanding share of the U.S. market as a result of benefits from "an array of production and financial incentives," a Department of Agriculture committee of inquiry concluded after a tour of Belgium, France and Italy.

Aids received by the EEC industry, which are unavailable to U.S. growers, have "stimulated the production of ordinary tablo wine, insulated prodncers against recurrent surpluses and have ultimately enhanced the EEC's ability to achieve an expanding share of the U.S. wine market," the inquiry reported.

A team of wine analysts was sent to Europe last summer at the request of California Senator Pete Wilson after U.S. wine producers complained of unfair practices by their European counterparts.

Senator Wilson and three others representing wine producing states have proposed a "Wine Equity Act" which would require that American wines be admitted into foreign countries on the same non-tariff basis as foreign wines are currently allowed into the U.S. An aid to Senator Wilson said support for the legislation is building and that there is talk of forming a wine caucus to push through legislation favourable to grower interests.

American wine producers, led by the California Wine Institute, have complained that the sales of low-cost European tablo wines are booming while the growth rate of the U.S. industry has slowed significantly. The U.S. investigators said that almost one-third of the growth of the American market during the past decade has been filled by imported wines, which now hold 26.5 per cent of the market. Italy and France are the leading suppliers.

The investigating team acknowledged that depreciation of the lire relative to the U.S. dollar plays a part in the low costs of Italian wine in the U.S. However, it said the exchange rates "also fail to provide a fully adequate explanation" of the price difference.

The study found that particular assistance is being provided to EEC co-operatives. It said that support for table wine includes payments for distillation of surplus wine, help for wine storage and direct subsidies for export to non-North American destination, with appropriations for these activities having grown from about $80m in 1978 to close to $600m in 1982.

In addition, a vast array of preferential credits, low interest loans and ontright grants are given, the report said.

"These are the kinds of subsidies which do not permit us to compete fairly, and we have to take the necessary aleps to see that it is stopped so that we can compete," Senator Wilson said.

Tokyo offers low-interest finance to importers

By Charles Smith, Far East Editor, in Toyko

JAPAN claimed yesterday that it had moved into the "realm of active import promotion" with its newly issued package of economic measures.

The claim, made by Prime Minister Yasuhiro Nakasone, is based on the fact that the package includes proposals for making available low-interest rate government finance to importers of manufactured goods.

Previous Japanese trade packages have consisted of measures to "open" the market but have not offered direct incentives to importers.

The new import financing outlined in the package includes some Y20bn (£57.4m) worth of funds which will be administered by the state-owned Export Import Bank.

The Exim bank finances about Y800bn worth of Japanese exports per year and about Y400bn worth of raw materials imports but has never been previously involved with imports of manufactured goods.

Officials at the Ministry of International Trade and Industry who were responsible for drafting the import promotion section of the package said that the Exim bank was considering making finance available for the servicing and other costs related to sales of imported goods in Japan as well as for products. This proposal, however, is spelled out only tentatively in the package.

Other import promotion measures featured in the package include the proposed introduction of a system under which the Bank of Japan will purchase yen denominated import bills.

This would provide an alternative to the dollar-financing of imports which is standard practice in Japan.

Miti officials said on Friday they expected to be able to introduce the system but that details were still under discussion with the Bank of Japan.

The section of the package dealing with market apening—as apposed to import promotion—outlines a scheme under which Japan will accelerate the Tokyo Round timetable for tariff cuts on about 1,200 manufactured goods by one year.

Japan is understood to be ready to speed np its tariff cutting timetable by three years if other nations agree to follow suit.

The package also lists 44 items on which deeper tariff cuts will be made as from the start of the 1984 fiscal year. The list includes integrated circuits, combine harvesters, automatic regulators for cars, and electronic cash registers.

A request by the EEC for a cut in the import tariff on wine is understood to have been rejected by the Ministry of Finance.

A final section of the package dealing with capital flows and foreign exchange movements indicates that Japan will substantially modify the "real demand rule" under which Japanese companies are only allowed to make forward contracts on the Tokyo foreign exchange market on the basis of actual import contracts.

Gatt consensus may soon emerge on code for trade in services

BY PAUL CHEESERIGHT IN BRUSSELS

CONSENSUS among the trading nations about the need, or not, for a major new round of negotiations to establish a set of international rules for services is likely to emerge next year, according to Mr Leslie Fielding, the European Commission's director general of external relations.

The first step towards a negotiation could be taken at the annual meeting of the General Agreement on Tariffs and Trade (Gatt) in November 1984.

Services—shipping, banking, insurance, consultancies and so on—now account for a greater proportion of world commerce and employment than industry and agriculture, although the statistics are foggy and incomplete.

If there is a negotiation, then, as Mr Fielding pointed out in a London address to the Chambers of Commerce of the North Sea Ports, then the EEC role will be crucial.

Although the U.S. has spearheaded the drive for international disciplines in this eector, the EEC accounts for three times as many world exports of services as the U.S.

But the EEC so far does not know either what it would want whether it would benefit from some international code of rules.

There is a prima facie case for some liberalisation, or at least for no new measures of protectionism. "Our positive trade balance in services does at least suggest that the Community has an interest in preventing the erection of new obstacles to our service sector exports. But a firm view has yet to be reached," said Mr Fielding.

The other side of that argument is that EEC services exports have continued to expand without a firm set of rules. Further, there is a firm body of evidence supporting the notion that liberalising trade in goods was beneficial for the world economy, but there is no consensus on whether such considerations could apply to services.

The link between liberalisation and economic growth has not been accepted in the EEC itself for services. The UK Government for years has been trying, and will return to the attack again today in Luxembourg, to have the EEC insurance market freed up.

By the summer of next year, the EEC will need to have thought through the problems sufficiently to have come up with a preliminary position to take to the Gatt annual meeting. To reach that position, it has to know the facts.

So one immediate priority of the Commission work on the subject is to build up a statistical base. It needs to make up for the lack of a collective memory covering the sector as a whole and it needs to make an assessment of the barriers to services trade as they exist.

But one of the difficulties, as Mr Fielding described them, is the lack of any clear-cut private sector view of the issue, as there is in the U.S. "It is much easier to make headway if you have a following wind," he said.

Turkey fees protest by airlines

By David Barchard in Ankara

INTERNATIONAL airlines have served notice on the Turkish Government that they regard charges for the newly opened terminal at Istanbul airport as "unacceptable" and will boycott it unless fees are lowered.

The terminal, designed to replace the old-fashioned existing international terminal —generally agreed to be among the worst in Europe as a major centre—was opened two weeks ago by President Kenan Evren.

So far only three international airlines have joined Turkish Airways (THY) in setting np in the new terminal. They are Saudia, PIA of Pakistan, and El Al of Israel. In each case political motives seem to have prevailed over commercial considerations.

The other airlines summoned to a meeting in Istanbul on October 14 at which they informed the Turkish authorities that the charges being demanded for the new terminal are believed to be the highest in the world. One company said that its fee for office space had jumped from $160 a month in the old terminal to more than five times that amount.

Landing fees are also believed to have increased sharply for airlines in the new terminal.

Beech plans new executive jet

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BUSINESSMEN OF the future may well find themselves flying in a new-style corporate turbo-propeller-driven aircraft — the 400 mph Beechcraft Starship One, an executive aircraft with a design shape approaching that of science-fiction spacecraft.


The Beechcraft Starship One

The aircraft, a twin-engined type, is called a "Jetfan" by Beech Aircraft Corporation of the U.S., which has already flown an 85 per cent scale model of the Starship One.

Beech explains that "Jetfan" is a name coined by the company "to indicate the convergence of jet-prop, prop-fan and fan-jet technology." The propellers are driven by two turbine engines (Pratt & Whitney PT6A-60 turbo-props of 1,000 shaft horsepower each).

The aircraft, which will seat between eight and ten passengers, will be able to cruise at speeds of more than 400 mph. In appearance it will hava two small winglets at tha front of the fuselage, a sharply swept wing with vertical winglets mounted at the tips, with tha engines mounted aft over the wings.

A full-scale version of the aircraft will be completed in 1985, and first customer deliveries will begin soon afterwards. The aircraft will be built extensively of advanced composite materials and titanium.

Mr Linden Blue, president and chief executive of Beech, said that the company had been working for the past five years on a design which would lead the business aircraft industry for the next 20 years.

The Starship One would be the first of a family of new Beechcraft models. Features of the new aircraft would be higher cruising speeds and altitudes, greater fuel economy, lower cabin noise levels, and improved short airfield performance.

The price for a Starship One will be about $2.7m in 1983 dollars. Beech Aircraft Corporation is a subsidiary of the Raytheon Company.

U.S. curbs imports of textiles

BY ANTHONY MORETON, TEXTILES CORRESPONDENT

THE U.S. has severely tightened the screw on imports of textiles and clothes from its major Far Eastern suppliers over the past few months and there are now fears among them that the influential textile lobby in Washington will make life even more difficult for the suppliers next year as the presidential election approaches.

Under the bilateral trade agreements negotiated early last year quotas were set on a number of categories of goods from Taiwan, the most important supplier to the U.S., South Korea and Hong Kong.

The agreement gave the U.S. the right to "call for consultation"—a euphemism for the right to renegotiate the terms of the treaty—where it felt Far Eastern imports were rising rapidly.

It has used these "calls" quite widely over the past three months—25 times in the case of Taiwan, 19 with South Korea and 14 with Hong Kong, one of which has subsequently been lifted.

The result has been to cut severely the amount of goods entering the U.S. outside the quota system. In Hong Kong's case 68 per cent of its exports were covered by quotas before the new "calls" and the figure is now 84 per cent.

As a result of the additional "calls" Taiwan now has 48 categories of goods liable to quota, South Korea 47 and Hong Kong 36 with the possibility of another one being added.

Although the "calls" are limited in the present calendar year the rules of the Multi-Fibre Arrangement, which covers a large part of world textiles trade, allow them to be made permanent and there are fears in the Far East that this will happen. President Reagan will be under great pressure to do something about rising imports as the election approaches in November 1984.

Hong Kong's exports to the U.S.—its principal market—have already risen strongly this year as a result of strong consumer demand. Clothes and apparel went up 28.8 per cent in the first half of the year compared with a year earlier from HK$5.2bn (£????) to HK$6.7bn.

Its exports have risen even more strongly to Canada—by 40 per cent—indicating it is finding conditions more favourable for its goods throughout North America. This is in marked contrast to its experience in Europe where goods shipped to the UK have gone down 9 per cent and those to West Germany have risen by a minimal 0.5 per cent.

Hong Kong managed to fight off U.S. attempts to impose a "call" on one category covering cotton sheets by threatening to take its case to the Textiles Surveillance Body of the General Agreement on Tariffs and Trade in Geneva.

It felt that in eight cases the more diplomatic approach would be to agree to the "calls" and in four others the U.S. imposed the quota against the wishes of the Hong Kong authorities.

Most Far Eastern suppliers find the Americans difficult to negotiate with. They can reach initial agreement quickly but then find they might have to renegotiate bits of it over the life of the agreement.

SHIPPING REPORT

Gulf tanker rates rise sharply

BY ANDREW FISHER, SHIPPING CORRESPONDENT

TANKER RATES out of the main Iranian oil terminal of Kharg Island moved up sharply last week as both sides in the prolonged war between Iran and Iraq stepped up their threats of action in the Gulf.

Japanese charterers, especially, were keen to obtain vessels for loading np to mid-November, while the terminal was still in action.

Iran has said it will block the vital Straits of Hormuz through the Gulf if Iraq, uses Super Etendard aircraft supplied by France against its tankers. This would cut off a large part of the West's oil supplies and leave many large tankers idle, since their main employment is on routes from the Gulf.

The main beneficiaries of last week's activity were owners of smaller VLCCs (very large crude carriers). One voyage from Kharg Island to Japan for a 230,000 ton cargo was fixed at Worldscale 44, and for non-Iranian loadings to the East the level was Worldscale 41½ — both about ten points up on the previous week.

According to E. A. Gibson Shipbrokers, VLCC rates to the West also put on a few points to Worldscale 35. "With the current volume of inquiry quoting, there is every anticipation of higher levels being maintained."

The brokers noted that it had been some time since only six VLCCs had been available in the Gulf, with another six also able to guarantee oil liftings in October.

And with only a small number of ships due to enter the Gulf in November, owners have clearly been encouraged to press charterers for higher levels.

Even so, the VLCC tonnage surplus remains large and most operators feel this will have to come down sharply through scrapping before the tanker market becomes profitable again for owners.

Last week also saw some uplift on the dry cargo scene. Denholm Coates reported that the Atlantic market was now showing signs of life, with a peak rate of $8.70 per ton paid for a Panama size ship — 60,000-80,000 deadweight tons and able to navigate the Panama Canal — for grain from the U.S. Gulf to Europe. This compared with the previous week's level of $7.50.

Two major secondhand purchases enlivened the sale and purchase scene in the week. The Cast Narwhal — an ore-bulk-oil carrier which was the largest ship in the recently split up Cast fleet — was sold to Norwegian interests for $5.5m.

Galbraith Wrightson noted this was scarcely more than her demolition value to breakers in the Far East. The 54,000 dwt King Charles bulk carrier, laid up in London for over a year, went for a reported $4.75m to Greek buyers.

Portugal cuts import charge

By Diana Smith in Lisbon

THE PORTUGUESE Government has undertaken, as part of its standby $480m (£329m) agreement with the International Monetary Fund (IMF) to reduce a 30 per cent import surcharge imposed in January by the former administration to 10 per cent no later than March 31, 1984.

The 30 per cent surcharge did not bring expected higher revenue and was resented by Portugal's trading partners, especially since it was coupled with deliberate but undeclared bureaucratic obstruction of import licences.

Desalination contract signed

TOKYO — Mitsubishi Heavy Industry, Penta Ocean Construction and Mitsubishi have signed a contract for a desalination plant on a turnkey basis with Saudi Arabia's Saline Water Conversion Corporation, a Mitsubishi official said.

The contract for the 223,000 tonne per day plant is valued at $390m (£260m).

The plant will consist of 10 desalination units and will be delivered in May, 1988, he said. It will be built about 150km south of Jeddah and will supply water for drinking and industrial use.

● Kumagai Gumi said it won a Y16bn (£46m) order from the Indonesia public works ministry to build a 72 km highway from Jakarta to Cikampek.

World Economic Indicators

TRADE STATISTICS

		Sept. '83	Aug. '83	July '83	Sept. '83
Japan $bn	Exports	12.30	12.45	11.96	11.15
	Imports	10.96	10.08	9.66	10.57
	Balance	+1.34	+2.39	+2.30	+0.58
		Aug. '83	July '83	June '83	Aug. '82
UK £bn	Exports	4.926	4.731	5.107	4.390
	Imports	5.064	5.081	4.945	4.337
	Balance	−0.138	−0.350	+0.162	+0.053
U.S. $bn	Exports	16.630	16.629	17.008	17.463
	Imports	22.782	21.950	21.024	22.930
	Balance	−6.152	−5.321	−4.016	−5.467
France FrFrbn	Exports	64.52	59.20	60.30	52.60
	Imports	64.91	62.20	64.00	61.50
	Balance	−0.39	−3.00	−3.70	−8.90
W. Germany DMbn	Exports	32.400	33.200	36.840	30.700
	Imports	29.900	31.030	32.923	27.990
	Balance	+2.500	+2.170	+3.917	+2.710
		June '83	May '83	Apr. '83	June '82
Netherlands Flbn	Exports	15.363	15.520	14.843	14.628
	Imports	14.031	14.501	14.031	14.246
	Balance	+1.332	+1.019	+0.812	+0.382
		May '83	Apr. '83	Mar. '83	May '82
Italy Lbn	Exports	8,245	9,002	8,496	8,933
	Imports	7,951	10,715	8,716	10,040
	Balance	+294	−1,713	−220	−1,107

STATISTICAL TRENDS: FRANCE

Austerity measures begin to bite

THE AUSTERITY measures taken by the Government in Merch 1983 bave begun to affect the economy. Cuts in public spending and tax increases, together with a tigbter monetary pollcy were imposed to reduce Inflation and restore external balance of payments.

Progress in cutting inflation bas been slower than anticipated, and France's Inflation differential with its main competitors remains bigh as rates of inflation bave dropped sharply elsewhere. The country's external payments position elready looks healthier with a trade deficit of only FFr 400m ($50m) in August. Foreign borrowing has slowed and foreign exchange reserves are at a record high.

The austerity programme came at e time when GDP growth was already slowing—to 0.1 per cent in the first quarter—and, nverall, tbe economy is set to contract by 0.5 per cent this year. The effect of the new policles is likely to result in negligible growth in 1984 as well.

Personal consumption is likely to decline by 1 per cent this year in real terms. Declines in real consumption have only occurred in five quarters since 1970, and never in two consecutive quarters. Now it seems likely tn fall in 1984, too.

The March measures bave been reinforced by the restrictive September budget, a central aim nf which was to limit the Gnvernment deficit to 3 per cent of GNP. The French deficit is not especially high by international standards, but has become rapidly worse since the 0.3 per cent surplus in 1980.

The eusterity programme signalled that the Government bad finally abandoned its original expansionary policies, which were based on a growth in domestic demand and exports. It was forced to change course by the severe deterioration in France's external position end the consequent crises of the country's currency.

The problem was the growth differential between France and its trading partners. The realignments of the franc were sufficient tn maintain price competitiveness, as the figures on relative wbolesale prices indicate, but not to offset the trade effect of growth in France at a time of continuing recession elsewhere.

This left two alternatives: protectionism and withdrawal from the EMS, or action to dampen domestic demand, reducing imports and inflation. Tbe comparison between the Government's forecasts in Angust 1981, and the ectuel outturn illustrates which assumptions proved incorrect.

Private consumption grew faster than expected, while investment fell, and exports declined in contrast to the substantial growth predicted.

The trade balance worsened with every area except Opec, especially with other OECD economies. In terms of the commodity balance, energy was the only sector to show real improvement. France's share of the export nf manufactures from the main producing countries declined in 1980 and 1981 and remained stable in 1982.

Commentary by Our Economics Staff; data nnalysis by Financial Times Statistics Unit; charts and graphs by Financial Times Charts Department.

RELATIVE PERFORMANCE
annual % changes

	1967-73	1973-80	1981	1982
Real GDP				
France	5.6	2.8	0.3	1.7
Germany	5.3	2.3	−0.2	−1.2
EEC	5.0	2.3	−0.6	0.2
Investment				
France	6.6	1.1	−2.7	−1.0
Germany	5.8	1.5	−3.8	−4.2
EEC	5.2	0.8	−5.1	−2.8
Consumer prices				
France	5.9	11.1	13.4	12.0
Germany	4.3	4.8	5.9	5.3
EEC	5.5	10.7	11.4	9.9

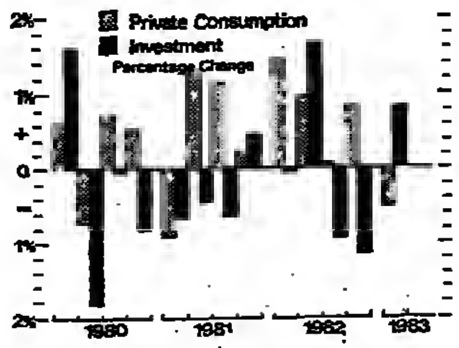
† In industry.
Source: OECD

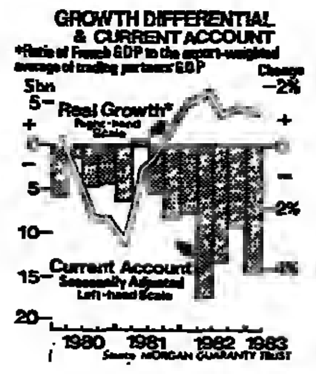
Economy

REAL GDP
% change on previous period

1976	5.2
1977	3.1
1978	3.8
1979	3.3
1980	1.1
1981	0.3
1982	1.7
1983†	−0.5
1984†	+0.5

† Forecasts.
Source: OECD, Phillips & Drew

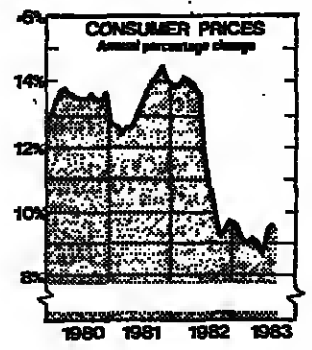


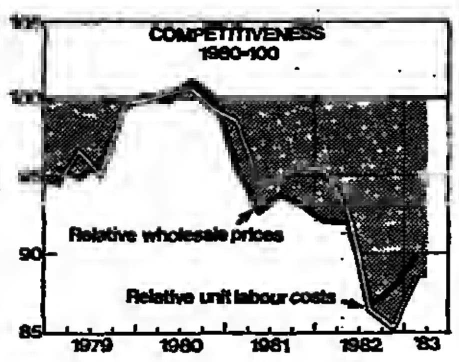


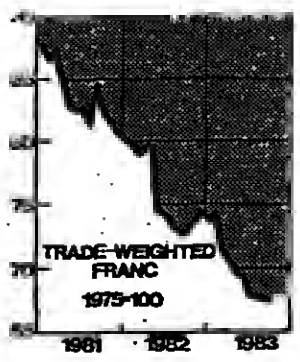
1982 TRENDS
% changes

	Official French forecasts, Aug. 1981	Out-turn
Private consumption	2.5	3.5
Public consumption	2.7	2.5
Gross fixed investment	2.3	−1.0
General govt.	3.2	−2.0
Residential construction	0.1	−5.0
Non-residential	2.0	0.8
Total domestic demand	3.4	2.8
Exports	4.9	−2.0
Imports	5.1	3.7
Change in foreign balance	−0.1	−1.3
GDP	3.1	1.7

Source: OECD







Labour

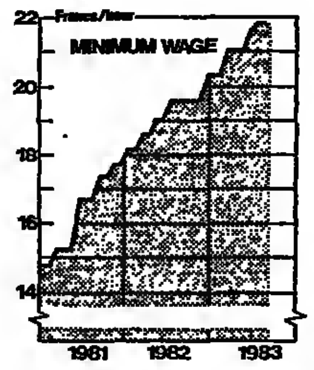
WEEKLY HOURS OF WORK
in industry

1981	
i	40.3
ii	40.3
iii	40.3
iv	40.2
1982	
i	40.1
ii	39.3
iii	39.2
iv	39.1
1983	
i	39.0
ii	38.9

UNEMPLOYMENT
% of labour force

		France	EEC	Big Seven
1981	i	6.7	7.0	6.1
	ii	7.1	7.7	6.3
	iii	7.5	8.1	6.5
	iv	7.7	8.5	7.0
1982	i	7.8	8.8	7.3
	ii	7.9	9.1	7.8
	iii	8.1	9.3	8.1
	iv	8.1	9.6	8.5
1983	i	8.0	9.9	8.5
	ii	8.2	10.3	8.5

Source: OECD

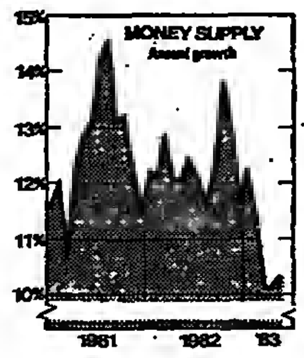


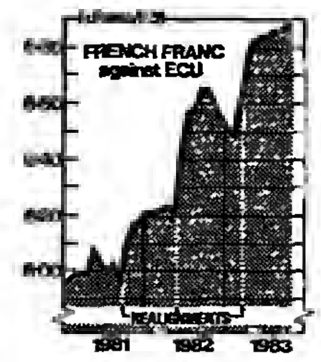
Finance

GENERAL GOVERNMENT SURPLUS/DEFICIT
% of GDP

1971	0.7
72	0.8
73	0.9
74	0.6
75	−2.2
76	−0.5
77	−0.8
78	−1.9
79	−0.7
80	0.3
81	−1.9
82	−2.6

Source: OECD





BALANCE OF PAYMENTS
FFrs bn

	Trade Balance	Current Account Balance
1981		
i	−12.93	−11.7
ii	−9.27	+6.0
iii	−9.54	−9.5
iv	−18.63	−10.5
1982		
i	−17.82	−15.7
ii	−25.44	−22.6
iii	−28.89	−25.5
iv	−20.43	−15.6
1983		
i	−23.76	−30.2
ii	−12.90	−2.9
July	−3.00	n.a.
Aug.	−0.40	n.a.

BALANCE OF PAYMENTS
$bn

	1980	1981	1982
Current account	−4.2	−4.8	−12.1
Trade balance	−13.4	−10.0	−15.9
Services	13.4	9.4	8.4
Transfers	−4.2	−4.2	−4.6
Long-term non bank capital	−1.4	−3.9	4.4
State authorised borrowing	4.3	6.2	11.9
Direct investment	0.2	−2.2	−1.4
Other	−5.9	−7.8	−6.2
Short-term non bank private capital	2.8	−2.3	1.1
Bank capital	7.2	7.8	2.2

Trade

TRADE BALANCE
by area (bn dollars)

	1980	1981	1982
OECD	−12.2	−11.3	−16.6
EEC	−4.6	−5.6	−9.8
W. Germany	−4.0	−4.2	−5.8
OPEC	−15.3	−11.3	−8.2
Other developing	4.8	5.3	4.0
Comecon	−0.3	−0.9	−6.5
Other	−0.5	−1.0	−0.8

+ customs (FOB/CIF)
Source: OECD

TRADE BALANCE BY COMMODITY
(bn dollars)

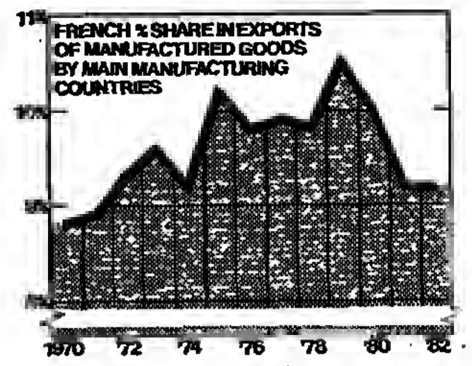
	1980	1981	1982
Agriculture & food	2.8	3.8	2.3
Energy	−31.5	−29.7	−27.2
Intermediate industrial	−1.9	2.6	−4.1
Capital equipment	6.3	6.9	4.9
Cars & transport	6.6	5.0	3.2
Household goods	−2.9	−2.2	−3.3
Miscellaneous	−3.0	−3.3	−2.5

+ customs (FOB/CIF)
Source: Morgan Guaranty Trust

% SHARES IMPORTS

	1963	1975	1981
Italy	10.6	12.6	14.0
W. Germany	30.8	28.6	25.0
UK	10.1	6.6	6.7
USA	15.3	9.6	11.0
Japan	0.6	3.1	4.1
Other	32.6	39.5	39.2
Total (U.S.$m)	4088	30721	66691

Source: OECD



OVERSEAS NEWS

J. D. F. Jones in Johannesburg reports on a bitter national debate

Blacks furious over constitution

WHITE South Africans are caught up in a maelstrom of political debate leading to November 2, when they will decide whether to introduce a new constitution. The proposals would allow both the 2.5m "coloured" people (of mixed race) and some 800,000 Indians limited representation in the hitherto exclusive white preserve of central government.

Yet one of the most fascinating aspects of the referendum campaign is that the 20m or more blacks – who will not be asked what they think on November 2, and to whom the new constitution offers no prospect of change – are insisting on having their say.

Not surprisingly, their rejection of the constitution is almost unanimous. But it is being uttered with a force and an anger which have not been heard in public for years.

This constitution "has divided the whites, the coloureds and the Indians, and the only people it has unified are the blacks. It has unified the blacks against the whites," Mrs Helen Suzman, the veteran opposition leader, said in Parliament last May. She is being proved right.

Factions which would normally have little good to say to each other all agree that this constitution is designed to enshrine apartheid and ensure white domination of the new political system, and therefore is the opposite of the reform its architects claim for it.

The most vociferous opposition has come from Chief Gatsha Buthelezi, leader of the Inkatha movement and Chief Minister of the Zulu tribal homeland of Kwazulu.

He is an old enemy of the Pretoria Government, but is also distrusted and criticised by many blacks because he has co-operated, to a point, with the Government's ethnic homeland policy.

Chief Buthelezi is sustaining a remarkable – and widely reported – campaign of passionate criticism of the new constitutional proposals. He keeps on warning whites that the constitution cannot be "a step in the right direction" – as many whites believe – because it is vehemently rejected by three-quarters of South Africa's population. "It is basically bad, and so founded on racist principles that we want no part of it," he says.

His most powerful argument directed at the white voters is that a Yes vote would pull the rug from under the feet of black moderates like himself, and lead to conflict and confrontation.

Following his example, five more leaders of the Government-created Bantustans (including even the oldest, the "independent" Transkei) have come out against the constitutional proposals and called for a No.

Yet if the constitutional campaign has galvanised such "conservative" blacks, it has had a similar effect at the other end of the political spectrum, where the radical black movements have recently enjoyed a noteworthy recovery after years of suppression.

It is too soon to risk a judgment of the lasting strength of this revival, and indeed it is not yet clear whether the Government will permit it.

But, for the moment, two broad movements are making the headlines.

One is the United Democratic Front (UDF), which launched itself last month, claiming to bring together 400 organisations.

Although the 400 include football associations and social groups as well as more overtly political and civic associations, the UDF can claim to be the biggest mass front since the Congress movement of the 1950s.

Chief Buthelezi: 'racist principles'

It traces its descent from the Freedom Charter which inspired the major opposition movement of that period and, significantly, it is multiracial.

The other new organisation is the National Forum, launched in June. It is distinctly radical, its descent is from the Black Consciousness ideology and it therefore rejects multiracialism. Again, it is too soon to judge its impact.

Animosities between the two streams have already surfaced and many black groups have been trying not to come down firmly on one side or the other. However, both groupings are likely to practise non-co-operation with apartheid structures, which would mean boycotting any Government attempts to implement representative mechanisms for the coloureds and Asians.

As for the coloured community, it has been confounded – and split – by this vehement debate. The principal coloured party has been the Labour Party, whose leaders earlier this year took a hasty decision for "qualified participation" in the new constitution. By this they mean that the party rejected the constitution but would operate within it in order to try to change it from inside.

Not surprisingly, this policy is confusing its followers. Radicals (including those in the UDF) pour scorn on the old-guard Labour Party leaders (who would presumably be in the running for cabinet and other jobs).

It is even possible that the coloureds might, if asked, turn down the constitution, but no arrangements have yet been announced to consult their opinion. There is only vague Government talk of a coloured referendum in due course, "if they ask for one."

The Indians have been keeping a lower profile and observers here suspect a majority would probably accept the constitution. There is an active radical wing which says No, but especially in Natal, the Indians are nervous of their relationship with the blacks, and must be listening to Chief Buthelezi's prophecies of doom.

The paradox is clear: the Government declares that a Yes vote by the whites is essential to maintain the momentum of "reform" in South Africa. The blacks, with a unanimity and an energy that have not been seen for a long time, insist that a Yes vote will take the country even closer to what Chief Buthelezi describes as "total political disaster."

"Just how close to a disaster it is," says the chief, "will be spelled out by the extent to which white South Africa votes Yes. Every No vote is vitally important for the future." No wonder the white voters themselves are becoming confused.

Irish insurer 'may need decade to recover'

BY BRENDAN KEENAN IN DUBLIN

IT COULD take a decade to restore the troubled Irish insurance group Private Motorists Protection Association (PMPA) to a sound financial footing, according to Dr Garret FitzGerald, the Irish Prime Minister.

In the meantime, the 2 per cent levy on all non-life premiums will have to continue and the administrator appointed to run PMPA will be able to draw on the I£10m ($11m) per year which the levy will provide.

Dr FitzGerald, who was speaking at the end of his party's annual conference, confirmed reports that the Government had to threaten to appoint a liquidator in order to get PMPA, which insures about a third of the republic's drivers, to make information available on its affairs.

Earlier, Dr FitzGerald confirmed his commitment to social reform despite the divisions caused in his Fine Gael party during the recent referendum on abortion.

He said he would return to his programme of constitutional reform in areas such as divorce when the New Ireland Forum, which is trying to devise structures for an all-Ireland political settlement, completes its work.

Dr FitzGerald was cautious on the prospects for the forum, saying it was too early to assess the extent to which real agreement could be reached on acceptable solutions.

Senior Irish ministers are to have a series of meetings with employers, unions and farming bodies to discuss the problem of unemployment, which is now 17 per cent and still rising.

Dr FitzGerald said those in work would have to consider time and income-sharing with the unemployed.

State spending target nearer agreement

BY PETER RIDDELL AND MAX WILKINSON

THE TREASURY has narrowed to substantially less than $1bn the gap between its target for public spending next year and the demands from departments.

After strong backing for the Treasury line from the Prime Minister in Cabinet last week, it is now considered a near certainty that the Government will be able to announce an agreed spending figure of £126.4bn for 1984-85 in its Autumn Statement next month.

However, some tough bargaining remains to be done in the next two weeks, mainly with the Ministry of Defence, about tha arithmetic behind the overall figure.

The Treasury now seems confident that if the worst comes to the worst, it will be able to "lose" any remaining overshoot in the public expenditure accounting system as happened last year.

However, the Treasury will be arguing strongly in the so-called "Star Chamber" of Senior Ministers under Lord Whitelaw's chairmanship, that it would be wrong to raid the £3bn contingency reserve to square the accounts as it did this time last year.

It will point out that this only postponed the problem, since the Chancellor was forced to announce an emergency package of £1bn cuts and asset sales in July, only eight months after the last Autumn Statement on public spending.

The main problem remaining for next year is the defence budget, which is still substantially above the target level for 1984–85. The Treasury has suggested continuing into next year part of the current financial year's £240m cutback, announced in July. The Treasury is anxious to restrict next year's increase in the defence budget to about £1.3bn or 8 per cent compared with the 1983–84 figure.

There has also been an intense debate about whether to continue the present British commitment to tha Nato target of a 3 per cent annual increase in defence expenditure beyond the present expiry date of 1985–86.

The Treasury has argued that the basis of the commitment should be changed from the present volume terms to cost terms. This could save up to about £350m in 1984–85.

The present volume basis means that if the cost of defence equipment rises faster than prices generally, the difference is added on top. If the defence budget were expressed in cost terms, the Ministry would get no extra cash to compensate for any relatively faster rise in weapon prices.

One could have rival groups competing to run regional electricity networks, regional gas boards, and competing against each other for the franchises."

Dr Owen urges the creation of "a small ministry for competition to bust open private and public cartels and monopolies. Wa should see the demerging of large private corporations, the curtailing of the powers of the multinationals, and the disaggregation of the public sector as part of e strategy which includes privatisation."

Most of the issues which will come before the "Star Chamber" are those which are thought to involve general or political principles which have implications for the pattern of spending right through to 1986–87.

The Treasury has suggested that part of the cost of maintaining a garrison on the Falkland Islands should be counted within the 3 per cent Nato commitment

Vital decision today in Telecom dispute

BY BRIAN GROOM, LABOUR STAFF

THE Post Office Engineering Union's privatisation dispute will reach a critical phase today if British Telecom (BT) goes ahead with a threat to dismiss 19 London area telephone engineers who have refused to work as directed.

The union's executive will meet today to discuss the outcome of efforts to avert a clash over the issue. By midday it expects to hear BT's response to representetions made last week.

The 19 have twice refused management instructions to do the work of striking colleagues – the second time after signing e pledge to work as directed.

The union now has more than 2,000 members on strike or suspended for refusing to work at central London locations, including the international telephone and telex exchanges. It disputes BT's claims that services to customers are being maintained.

Further industrial action, possibly this week, is expected by telephone operators in the Union of Communication Workers. Some of these in central London struck for 24 hours on Friday.

Today the union executive will also consider the impact of its court victory against the attempt by Mercury, tha private telephone network, to get industrial action lifted.

Mercury is expected to appeal against the High Court judgment. This is likely to be heard in e few weeks. The Government is expected to ewait the final outcome of the case before responding to appeals from such bodies as the Institute of Directors to tighten the 1982 Employment Act.

Trade unions may also take a cautious view of the Mercury ruling. Although it would allow them to take industrial action legally in similar circumstances, these may not always apply.

The National Union of Railwaymen (NUR) faces a tricky decision over whether to block the laying of Mercury cables beside railway tracks when the privata network expands into the provinces.

Its own campaign against privatisation could be undermined if the NUR refuses to help other unions out, but, unlike the Post Office union in the Mercury case, this work would provide jobs for its members rather than take them eway.

Meanwhile, the six unions representing British Telecom workers will step up their campaign against privatisation today by claiming that the Government's flotation of shares is e threat to the defence of the realm.

Fresh argument on low-tar cigarettes

By Lisa Wood

THE controversy over advertising and cigarette advertising was fuelled with the publication yesterday of new research on the issue by the Advertising Association, which represents advertisers, agencies and the media.

The research is on the penetration of low-tar cigarettes, which are allegedly less harmful to health than high-tar cigarettes, in countries with and without advertising bans, and on the effects of advertising bans in countries where such bans exist.

According to information published by the association, low-tar cigarettes make up a far smaller proportion of sales in countries such as Norway and Singapore than in countries such as Sweden and Hong Kong, where advertising is allowed.

The association said: "If, as has been suggested by recent research, low-tar cigarettes are half as harmful as high-tar cigarettes, the logical conclusion is that advertising bans achieve precisely the opposite effects to those intended by those who campaign for bans."

The association also says that per-capita cigarette consumption has grown substantially in countries such as Thailand, Taiwan, Iceland and Singapore, where advertising bans have existed for many years. In contrast, cigarette consumption has fallen in the UK, where advertising is allowed.

Advertising and Cigarette Consumption: £4, from Publications Department, the Advertising Association, Abford House, W5 Wilton Road, London SW1V.

Owen expands on shift in economic policy emphasis

BY PETER RIDDELL, POLITICAL EDITOR

A RENEWED commitment to the social market economy and to the breaking up of private and public-sector monopolies is made today by Dr David Owen, leader of the Social Democratic Party.

Dr Owen gives details of the shift in policy emphasis, which he outlined during his speech to the SDP conference in Salford, Manchester, last month, in e 5,000-word article in Economic Affairs, the redesigned successor to the Journal of Economic Affairs, published by Longman and the free-market Institute of Economic Affairs.

His theme is the need: "...to use the term 'market' openly and unashamedly. Britain cannot recover its economic strength without a far stronger emphasis on winning markets and without a clearer recognition of the commercial and competitive imperatives on which our prosperity depends."

The SDP support for decentralisation is defined as: "An endorsement of the market mechanism, which is in a sense a continuous referendum."

At a press discussion of his article last week, Dr Owen denied that be had moved to the right. He pointed out that some of his ideas reflected the original founding aims of the SDP and could also be seen in the work of leading Liberals like Lord Grimond and Mr John Pardoe.

Dr Owen refused to accept the conventional labelling of left/right, which, he said, bad been made meaningless by the shift in Labour's position.

Dr Owen is none the less very much leading his party, rather than following its consensus. There has been very little discussion by the party's ruling committees of his new emphasis and some Social Democrats and Liberals are unhappy about this change.

Dr Owen admits that be has broken new ground on industrial policy. Indeed, his desire "not to freeze the frontier between the public and private sectors," but to welcome change, is directly contrary to the preference of Mr Roy Jenkins, his predecessor, for caution and stability.

In the public sector, Dr Owen argues that the monopoly bargaining power of the unions will either have to be curbed or the structure itself will have to be changed.

"In public services where revenue can be raised through charges – telephones, post, gas, electricity, rail, water – the monopoly cannot be easily broken. If the unions will not accept agreements covering comparability, arbitration and no-strike provisions, smaller autonomous managerial units, more co-operatives and the widespread use of franchising will become inevitable.

"But disaggregation of national wage-bargaining procedures will only help if there is a decentralised employing authority with the ability to fix prices and wages. There is already a case for autonomous, all-purpose regional electricity authorities for England, as in Scotland, for regional autonomy for the gas industry and, perhaps more controversially, the railways."

Dr Owen suggests the more general development of franchising.

"The private provision of hitherto publicly provided goods and services, subject to official contractual, licensing or regulatory requirements, opens up a host of possibilities, even in the natural monopoly areas, as alternatives to nationalisation on the one hand and/or large, private monopolies on the other."

Construction orders continue to advance

BY IVO DAWNAY

THE AUGUST figures for new construction orders, show a continued improvement on last year but little evidence of the rapid growth seen in the spring and early summer.

Private sector housing orders – the major impetus behind the building industry over the last two years – dropped from £254m ($380.6m) in July to £231m at seasonally adjusted constant 1980 prices. Industry observers claim the hot weather was a major factor behind the figure which, though 21 per cent higher than the same three months last year, is 15 per cent lower than the previous three-month period.

The surprise result came in public sector housing orders, up 13 per cent in June to August 1983 against the previous three-month period and 2 per cent higher than the same period last year. But analysts believe the Government's new moves to restrict public sector capital spending will drastically reduce this figure over the coming months.

Industrial and commercial building orders remain depressed. Private industrial orders, at £122m in August against £163m in July, are 8 per cent lower in the last three months than in March to May hut 4 per cent up on the same period last year.

Similarly, commercial orders fell by 13 per cent and 7 per cent respectively.

Public works accounted for £336m in August (July £381m), making the June to August figures 4 per cent down on the previous three months, but 27 per cent higher than last year. At current prices, the total value of new orders in August was £1.03bn.

The National Federation of Building Trades Employers has warned that the new figures, though depressed, appeared more optimistic than its own state of trade enquiry, due to be published this week.

National Savings pour in

By Clive Wolman, Savings Correspondent

THE POPULARITY of the 26th issue of National Savings certificates produced a rapid inflow of money last month. The Government's total receipts from National Savings reached £333m, the highest monthly figure this financial year, according to statistics released yesterday.

This contrasts with net receipts of only £147m in July shortly before the 25th issue, which yielded 7.5 per cent per year, was withdrawn. The 26th issue which yields 8.25 per cent tax-free if held for five years, produced receipts of £176m in September, following its mid-August launch.

A new certificate issue traditionally attracts a major inflow in its first few weeks as high rate taxpayers use up their £5,000 quotas, the maximum permitted individual holding of an issue.

A total of £80.8m of National Savings income bonds were sold in September, up from £62m in August, thanks to a ½ per cent increase in the interest rate they offer.

Withdrawals from index-linked issues, whose popularity has sagged during the last year with low inflation, slowed down in September. However, after the 2.4 per cent bonus is paid at the end of this month, withdrawals are expected to accelerate once more.

The total government receipts from National Savings in the first six months of the financial year to September have reached £1.3bn, which is broadly in line with the £3bn target set by the Treasury for the year.

The recent upsurge in receipts has come despite the massive inflow of funds since July to the building societies, the main rivals to National Savings. Government sales of gilt-edged securities in September were also at their highest for more than a year.

The recent increase in savings is not the product of greater thrift, as consumer spending has also shot up during the last two months. It is more the consequence of the overshooting of government expenditure since April which has pumped more money into the economy.

Few new M-ways in UK

FINANCIAL TIMES REPORTER

BRITAIN figures low in an international line-up of new motorways opened in the last five years, according to the British Road Federation.

In the five years to 1982, France opened 814 miles of motorway and West Germany a further 556, compared with Britain's 157 miles.

The Federation, quoting from World Road Statistics 1978–82, published by the International Road Federation, said Britain spent only 32 per cent of road tax revenue on roads, West Germany 72 per cent, the U.S. and Switzerland 95 per cent and Japan 126 per cent.

Though the price of a gallon of petrol is shown to be lower than in many European countries, the British car-owner faces a heavier burden of taxation.

Engineering industry's export orders drop

BY ANDREW FISHER

NEW EXPORT orders for the engineering industry fell sharply in the three months to July, from the unusually high level in the previous three months, but home orders showed sizeable rises.

Export orders in the instrument and electrical angineering sector were down by 32 per cent, while those for mechanical engineering companies were 19.5 per cent lower.

This left the overall export order position for combined engineering 26 per cent lower during the three months. Actual export sales in the period were 2.5 per cent higher for instrument and electrical engineering and 3.5 per cent down for mechanical engineering.

In the home market, according to Department of Trade and Industry figures, new orders on the instrument and electrical engineering side rose by 20 per cent.

There was a gentler 7.5 per cent increase in mechanical engineering, to leave the rise for combined engineering at 14.5 per cent. Home sales in the instrument and electrical sector were 5 per cent higher, but 3 per cent lower in the combined total.

While total new orders for instrument and electrical engineering equipment rose 4.5 per cent, a fall in mechanical engineering left the combined engineering figure only 2 per cent higher, the same rise recorded for sales.

Separate figures for machine tools showed a rise in export orders in July compared with the previous two months, which more than offset the slight fall in home orders. Total new orders in the May to July period, however, were still 14.5 per cent down on the preceding three months.

Total machine tool sales were down by the same percentage. With monthly sales generally remaining above the level of new orders, orders in hand had dropped by 7.5 per cent by the end of July.

UK NEWS

Civil Service cuts on target

By Robin Pauley

THE CIVIL Service is now down to its smallest size for 20 years, and the Government appears likely to achieve its target of 630,000 civil servants, the smallest number since the war, by next April.

By April 1983, there were 649,000 civil servants, a reduction of 84,000 or 11 per cent since the Conservative Government took office in 1979, according to the Civil Service Statistics 1983, published by the Treasury yesterday.

The largest cuts since 1979 have been at the Ministry of Defence, down 38,400 to 210,165, the Environment Department, down 15,000, and the Inland Revenue, down 11,500.

Not all cuts are actual jobs abolished; some are transfers to the private sector through privatisation of some departmental services.

Some departments have increased their numbers, notably the Employment Department, which has increased by 6,800 since 1979, and the Home Office, which has increased by a net 1,481, mainly because 1,900 extra prison officers have been employed since then.

Most of the reductions have come about through natural wastage, early retirement and voluntary redundancy, although 8,000 industrial civil servants and 2,500 non-industrial staff have been made compulsorily redundant.

Since 1979, there has been a net decrease of 47,500 non-industrial staff and 36,700 industrial

In recent years, nearly twice as many women as men have been recruited to the civil service, and about 47 per cent of all non-industrial civil servants are now women.

MORE PIT CLOSURES POSSIBLE

MacGregor warns against ban

BY BRIAN GROOM, LABOUR STAFF

MR IAN MACGREGOR, National Coal Board chairman, yesterday delivered a stern warning of further pit closures and told miners that their overtime ban following the NCB's 5.2 per cent pay offer would hurt only themselves.

In an address to the National Union of Mineworkers' white-collar section at Wallsend in the north-east of England, Mr MacGregor said the industry had to produce cheaper coal from more modern pits and bring output into line with sales.

A start had been made by "getting out of hopeless places" which would never contribute to coal's prosperity, but the industry's prospects were being damaged by huge losses still coming from a small part of the business.

Much of the £800m aid from the taxpayer last year subsidised losses at collieries "where the only prospect, apart from closures, is to go on pouring away good money in order to pile up coal on the surface for which there is no customer."

Mr MacGregor denied, however, that the NCB was running down the industry. It would invest more than £700m this year and was creating new, efficient capacity faster than pits were being closed.

Since 1974, closures had cut capacity by 10.7m tonnes, but £4.2bn of oew investment had brought 17m tonnes of new capacity into operation, with another 25m tonnes in the pipeline for completion over four to five years.

He warned that some miners would lose £40 a week because of the NUM overtime ban, due to start next Monday, but it would not alter the iodustry's need to balance output against what customers would buy.

"The confidence of our customers and potential customers in coal as a long-term supplier of energy is bound to be shaken (by the ban) at a time when we are fighting for the size of our business," he said.

However, record coal stocks of more than 50m tonnes equalled half a year's output. "It will take years to bring our stocks back to manageable levels, overtime ban or no," Mr MacGregor said.

He said the 5.2 per cent wage offer on basic rates was a fair one and was only possible because of efficiency improvements. There was the chance, through the productivity scheme, to increase earnings further, he claimed.

Mr MacGregor said productivity, measured by output per man shift for all employed, was running at record levels and still rising ot orarly 4.7 per cent compared with last year.

He claimed that miners were still top of the earnings league for large industry groupings, as shown by the Government's recently published New Earnings Survey, and that their average earnings were more than 25 per cent higher than the average for manufacturing industry.

The NUM's own wages league, comprised of smaller groups, puts them 45th. Mr Arthur Scargill, NUM president, claims the pay offer will add less than 3 per cent to the industry's wage bill, and it seems likely to add no more than about 3.8 per cent to average earnings.

The New Earnings Survey figures show that faceworkers' earnings increased by only 3.5 per cent last year, and these of surface workers by 3.1 per cent with groups such as steel, gas and power workers closing the gap with the miners.

Nuclear waste sites announced this week

BY DAVID FISHLOCK, SCIENCE EDITOR

TWO POTENTIAL new sites for the disposal of radioactive waste, one in the south and one in the north cf England, are expected to be announced by the Government with Parliament reassembles this week.

Each location might cost about £100m to design, construct and fill with radioactive waste over the rest of the century.

The Government's announcement will be followed by "some years" of field work by scientists to confirm the suitability of the sites.

The sites have been made available by ICI on Teeside, and by the Central Electricity Generating Board on land it owns in the south of England.

Both sites will require a nuclear licence before they can be used to dispose of radioactively contaminated materials from the oucleer industry.

The Government expects to hold separate public inquiries in the mid-1980s into the suitability of each site.

The two sites, one for very slightly contaminated waste and the other for more radioactive materials, have been closed from a list of about 150 potential sites offered by the oucleer industry and private organisations.

The initial list was reduced to a short list of about sites by Nirex, the nuclear industry waste management executive, a new body set up by the British nuclear industry

EEC had 'modest' effect on industry

BY JOHN HUNT

THE EFFECTS of EEC membership on Britain's industry and trade. have been modest compared with the original "inflated expectations", according to a report prepared by the European Communities Committee of the House of Lords.

However, the committee is convinced that membership has helped sustain the UK's trade and industrial activity during the recent difficult years.

It believes Britain's economy is now inextricably involved with the Community and that withdrawal would have serious consequences.

The report, to be debated next month, concludes that membership has encouraged foreign direct investment in Britain, particularly from the U.S. and Japan. Britain's own domestic investment has probably been encouraged but, on balaoce, British investment in the Community has been reduced.

Taking evidence from a wide range of loterests it found a striking degree of unanimity on the importance of Britain remaining in the Community. "Quite simply, membership is regarded as essential to the future well being of British industry," it says.

It makes scathing comments on the barriers to trade in the Community and says bluntly: "Trade is not yet free – the Community is not a Common Market." It calls on the Government to work for the removal of non-tariff barriers

Protests over pasta dumping

Financial Times Reporter

THE Ministry of Agriculture and the EEC are investigating a complaint from a Scottish Labour MP that the UK pasta industry is being seriously endangered by the "dumping" of illegally subsidised Greek products on the home market.

Cumbernauld MP Mr Norman Hogg claims that the Greek Government, contrary to EEC regulations, has been subsidising the export of pasta products by up to 20 per cent. His coocern follows approaches from one of Britain's leading pasta manufacturers, James Marshall (Glasgow) based in Cumbernauld.

A spokesman for the Ministry of Agriculture says that complaints have been lodged with the EEC in Brussels over the level of offer prices for Greek pasta delivered in the UK.

Pledge by shipyard men

BY ANDREW FISHER, SHIPPING CORRESPONDENT

WORKERS at a small Scottish shipyard have promised to work their normal holiday periods, if necessary, in "a positive offer of flexibility" aimed at helping to win much-needed new orders.

The privately-owned Campbeltown Shipyard on the Mull of Kintyre in western Scotland is building two steel-hulled fishing boats worth more than £600,000 each. But it is desperate for more work to keep its 81-strong workforce busy.

The flexibility agreement, signed by shop stewards this month, has been agreed as state-owned British Shipbuilders is struggling to push through a drastic survival plan, which many of its 80,000 workers – threatened with job losses – have rejected.

Campbeltown recently lost an order to Denmark, where the competing yard quoted a price some 25 per cent lower.

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UK NEWS

Leyland Tiger takes on European coach market

BY HAZEL DUFFY, TRANSPORT CORRESPONDENT

LEYLAND has confirmed its arrival in the increasingly sophisticated European passenger coach market. The Royal Tiger, a fully-integral French design, was lined up for the first time with the latest continental designs at the biennial Nice international bus and coach rally.

The rally puts coaches through a number of technical tests, but for many visitors it is looks and the latest in passenger comfort which attract most interest in this highly customer-conscious market. Tour operators, for instance, now frequently specify vehicle types when arranging package holidays.

Leyland Bus, a division of Leyland Vehicles, launched the Royal Tiger last year. It is the first fully built up integral coach from Leyland, although Leyland has had an integral bus in the National and the Titan for many years.

The advantages of an integral design are that it enables some of the essentials for long coach travel, such as large luggage compartments, toilets and refreshment bars, to be incorporated. These can all be engineered on the Tiger chassis – with bodywork by companies such as Plaxtons and Duple in Britain, and Van Hool in Belgium, as vehicles shown in Nice demonstrated. The advantages of a fully built-up coach from Leyland's viewpoint are that it gains both complete control over the bodywork and maximum benefit from the integral design.

Leyland's survival as a coach manufacturer depends on the Tiger, which now comprises about 95 per cent of its coach sales. The Tiger is market leader in the UK with a 32 per cent market share this year. It is followed by Volvo (18.4 per cent) and Daf (11.1 per cent).

Imports of coaches have been growing steadily simply because British manufacturers were caught unawares by the changing demands of the market. British coach travellers saw and liked Continental coaches. For the operators, they offered more carrying capacity and more power.

Mr Ken MacIver, managing director of Leyland Bus, admits: "We were behind the times. We had not realised the strength of shift from the 'seaside' type of operation to the sophisticated coach required today. The difficulty for us is that we have had to bring out new products in a market which has halved in the past three years, and restructure at the same time." The fall in the market, measured by units sold, however, disguises the product mix change from light to beavyweight vehicles.

Coach sales represent 40 per cent of the Leyland Bus turnover of above £150m ($224.7m). The balance of sales is provided by buses, single and double-decker. The bus market is far from bealthy. Public transport operators have been pinched of capital resources and the end of government bus grants next year will lead inevitably to poor order books while fleets are being consolidated. Leyland received another blow when London Transport announced in the summer that it would cease purchases of Titan buses, designed by Leyland specifically for LT, and now to be phased out by Leyland by the end of next year.

Plant rationalisation, however, will lead to considerable cost improvement. The Bristol plant was closed at the end of last week, four years after Park Royal in London was closed. Production of buses and coaches is now concentrated at Leyland in Lancashire and Workington in Cumbria, with specialist bodywork carried out in Leeds and Lowestoft.

Leyland double-decker bus exports represent about one third of current vehicle production, MacIver intends to "reactivate" certain bus export markets where Britain has lost out to Mercedes and Volvo in particular. He also intends to launch the Tiger coach on the Continent within 18 months to two years.

Health authority to restructure ambulance service

BY NICK GARNETT, NORTHERN CORRESPONDENT

THERE WILL be 37 per cent fewer vehicles and 19 per cent fewer ambulance crew staff in a restructured ambulance service agreed in principle by the Regional Health Authority covering Tyne and Wear and Northumberland. One of the main features of tha programme is the separation of accident and emergency services from domestic patient transport.

The health service unions are considering the package but their initial reaction has been hostile. The proposals are in addition to the recently announced government cash restrictions.

Senior management claims the scheme would improve the service's response to the public, but Mr Keith Blackburn, Confederation of Health Service Employees' (Cohse) regional officer, says some response times would be lowered.

The package has been prepared by Mr Laurie Caple, chief officer for the Northumbria Ambulance Service. He said yesterday that the service was currently operated inefficiently, and that post-proficiency training for ambulance crews was, at the moment, "non-existent."

The remaining 467 out of 577 crew staff will receive an increase in their bonus payment from 15 per cent of basic pay to 35 per cent – e bonus of £31.85 for a standard 40-hour week.

Ambulancemen on emergency work would receive £7,500 a year and those doing non-emergency work, £6,300.

According to the regional bealth authority, the scheme would generate gross savings of £2.5m, and net savings of £1.6m a year after the payment of new bonuses for ambulance crew and officers. A decision has already been taken to reduce this group by 17 posts.

Doctors urge talks on future of NHS

GROWING CONCERN about the future of the National Health Service bas prompted the British Medical Association (BMA) to call for an urgent meeting with Mr Norman Fowler, the Social Services Secretary.

The BMA Council's executive committee wants to impress upon Mr Fowler the "paramount importance" of the health service being adequately financed for 1984-85.

The association'a call comes at the same time as the announcement yesterday that talks between the major spending ministers and the Treasury over further public expenditure cuts were unresolved.

"We are worried about plans for next year for further cuts in public expenditure and their effects in the future on the NHS," said a spokesman.

The BMA started a survey of the effects of cuts in expenditure in July after its last meeting with Mr Fowler.

Although the survey is not complete, Dr John Havard, secretary of the BMA, said it was already clear that if cuts were carried forward into next year there would be serious consequences for patients. He claimed that the arbitrary imposition of cuts in the middle of the year has beeo especially damaging.

Sizewell 'might cost 8,000 mining jobs'

BY A SPECIAL CORRESPONDENT

THE MINING industry could lose up to 8,000 jobs if the Central Electricity Generating Board (CEGB) goes ahead with Sizewell B, the National Union of Mineworkers (NUM) has claimed.

The public inquiry into the plan to build a pressurised water reactor (PWR) at Sizewell, Suffolk, heard an NUM statement that coal-fired plants have greater economic and social advantages.

Building Sizewell B would signal the start of a major shift away from coal-fired generation and this would inevitably seriously damage the coal industry's ability to maintain the current impetus and increase production.

The CEGB's plans would create an economic tragedy at a time when the UK industry was the most productive in Western Europe.

The NUM says a go-ahead for Sizewell B would worsen the social, economic and psychological consequences of the present round of pit closures which, it claims, threatens 70,000 jobs. About 8,000 jobs would be lost directly as a result of the construction of the proposed PWR.

The NUM says it is opposed to any extension of nuclear power and it renews its call to phase out existing stations. The National Coal Board is not opposing Sizewell B but it bas described the plan as a poor investment.

● The CEGB bas been challenged over its estimates for the construction period of the proposed plant.

Objectors have suggested that the 72-month target estimate and the 90-month central estimate are far too optimistic for what will be, in its British version, a prototype reactor. They have pointed to delays in the building of Britain's advanced gas-cooled reactors and to delays on PWR sites in the U.S. Delays are now being experienced on the Callaway and Wolf Creek plants, the design models for Sizewell B.

Mr Andrew Wilson, the CEGB's planning and technical services director, said the estimates were built up from engineering logic for the assembly of a PWR and included the experience of the UK construction industry. The CEGB bad also considered the PWR building experience abroad.

In the U.S. the average construction period for a four-loop Westinghouse PWR is 102 months. Delays in the main are caused by financial, legal and labour problems, although stations have been built in under five years.

Last act in consumer credit law

By David Lascelles

THE UK's 15-year quest for a comprehensive consumer credit law reaches its closing stages today when the Department of Trade and Industry lays the last regulations before Parliament for approval.

But the mammoth legislation, among the most complex ever passed in the UK, may have to be revised within three years to comply with a new EEC Directive being prepared in Brussels.

The large UK finance houses, which are most directly affected and which say the legislation is far too complicated and costly, are already preparing a case for a simpler Act on EEC lines.

Today's actions complete a process begun by the Crowther Committee in 1968, which led to the Consumer Credit Act of 1974. Since then, the DTI has churned out a steady flow of nearly 60 sets of regulations to make the act operative, and the Office of Fair Trading has issued 29 General Notices.

Today's move will set the size of transactions covered by the Act, the "cooling off period" in which someone who signs a credit agreement may change his mind, and other details such as the right to rebate when repayment is made early. They will become effective in May 1985.

Logica applies for full stock market listing

BY DOMINIC LAWSON

LOGICA, Britain's largest independent computer software company, is applying for a full listing of its shares on the Stock Exchange.

Close Brothers, the merchant bank, is offering for sale by tender 10.4m shares at a minimum price of 140p each. At that price, Logica would have a stock market value of £49m.

Mr Philip Hughes, the chairman of Logica, said yesterday: "We have deliberately pitched this at what we consider a very modest price. Let the market decide what we are really worth."

Logica is the latest in a series of a high-technology companies, which have come to the stock market in the past month. However, unlike the others, which include Atlantic Computers, Telemetrix, and Acorn Computer, Logica is overwhelmingly e software company.

There are only two other software companies on the stock exchange: Systems Designers and Micro Focus. Both enjoy very high share ratings.

When the Logica offer is completed, 30 per cent of the company will be owned by the public. The directors and staff will retain 38 per cent of the company, while nine existing institutional shareholders will retain 32 per cent. Through the issue, Logica will be raising at least £5.2m of new money to fund future growth.

Logica, which was founded in 1969, has seen its staff and turnover grow uninterruptedly, although there have been two occasions when profits dipped.

Last month, the company announced turnover and profits for the year to June 30, 1983 of £42m and £3.3m respectively. In the previous year, the company made £2.16m pre-tax profits on turnover of over £33m.

Mixed first half for CWS

By David Churchill, Consumer Affairs Correspondent

THE Co-operative Wholesale Society (CWS), the manufacturing and wholesaling arm of the Co-operative movement, had a mixed trading performance in the first half of its current financial year.

Total sales for the 24 weeks ending June 25 were up by 8.7 per cent to £949m on the same period last year – broadly twice the level of inflation for food and other prodncts sold by the CWS.

Consolidated trading profit at £7.47m was marginally down on the 1982 figure of £7.69m. After taking account of interest charges, the trading profit was down sharply at £4.91m, compared with £6.35m.

UK NEWS

Unemployment 'no guarantee of industrial peace'

BY BRIAN GROOM, LABOUR STAFF

A CONTINUATION of high unemployment when Britain comes out of recession will not guarantee industrial peace, Mr Pat Lowry, chairman of the Advisory, Conciliation and Arbitration Service, has warned. Its impact on labour relations would diminish because the numbers already out of work had less effect than the fear of fresh redundancies.

"We shall get accustomed to the numbers unemployed," he told the Institute of Personnel Managment's conference at Harrogate, Yorkshire. It would, however, continue to affect issues such as the union pressure for shorter working hours.

Mr Lowry said the challenge to management was: "To provide the organisational structure and industrial relations framework within which the energies of a new generation of managers can be released, to provide motivation and leadership which are not based on either employee fear or the alienation of trades unions as an act of deliberate policy."

Improving industrial relations was difficult against a background of social and economic divisions. He warned the Labour Party that simply to repeal all the present administration's labour laws would mean that stability in industrial relations would continue to elude Britain.

"We are unique among industrial countries in our apparent determination to tear up one industrial relations system by the roots and replace it with another," he said.

But he pointed out that many managers doubted the effectiveness of the Conservative Government's legislation, and said the central problems of industrial relations – improving productivity at work – were outside the scope of the law.

Mr Lowry said he had come across only one instance of a company and local union officials agreeing to hold a closed shop ballot under the 1982 Employment Act – a requirement from November 1984. Many companies appeared to be ignoring the issue in the hope that it would go away, or were prepared to meet any damages awarded against them in closed shop cases.

Jobs for the young 'through reflation'

BY ALAN PIKE, INDUSTRIAL CORRESPONDENT

YOUTH UNEMPLOYMENT is neither tolerable nor inevitable and solutions to the problems are available, Youthaid, a national charity concerned with the young jobless, argues in a background paper published today.

The paper sets itself the task of dispelling the view that high unemployment is unavoidable and attempts to create "a new atmosphere of public opinion in which no political party will be able to govern without a genuine commitment to create the jobs that are so desperately needed."

Youthaid stresses that young people are not immune from the worst consequences of unemployment. The most important single margin was poverty but "the sense of rejection felt by a young person who has never had a proper job and sees no prospect of getting one in a society where employment is still the commonly accepted measure of a personal value can be intense."

Youthaid rejects arguments that young people have priced themselves out of work, saying the relative level of youth wages has remained virtually constant, while unemployment has soared.

The paper accepts that it is less easy to deny that lower wages would improve young people's position in the labour market. Using this logic, however, it would be in the interests of any unemployed individual or group to make a wage bid below the going rate.

Youthaid believes the creation of these jobs must come through reflationary policies, concentrated in stimulating employment in areas of greatest need.

CBI rejects EEC shorter week plan

BY OUR INDUSTRIAL CORRESPONDENT

THE UK GOVERNMENT has been urged by the Confederation of British Industry (CBI) to block EEC plans for a reduction in working hours.

Members of the CBI council unanimously rejected the contents of an EEC Commission draft recommendation which proposes substantial reductions in working time and limitations on overtime.

Sir Terence Beckett, director general, said that the EEC document omitted any reference to the crucial issue of reductions in pay in return for reductions in working hours.

"Such a reference was in earlier drafts but has now been massaged out."

The time for Europe to switch to a shorter working week would be after Japan and other Far Eastern countries had done so and not before, he said. There was an "orchestrated campaign" in progress for the 35-hour-week which, if it succeeded, would not create jobs but put them at risk.

In the CBI's view marginal reductions in working time cannot be pieced together to form new jobs. The CBI believes that the adoption of a 35-hour-week would create serious skill mismatches and merely reduce competitiveness.

Yesterday's council meeting also debated the volatility of exchange rates, raising again the question of whether sterling should be included in the European Monetary System. Although the CBI's Committee has favoured such a move, its Economic Commitee has taken a contrary view. Consultation among members in the regions has been against sterling entering EMS, and this view was confirmed by a majority vote at yesterday's council.

Sir Campbell Fraser, president, said the CBI did not feel the time was ripe for Britain to become a full EMS member.

UK NEWS

Big increase in business at county courts

By A. H. Hermann, Legal Correspondent

A SUBSTANTIAL decrease in the number of proceedings begun in the Queen's Bench division of the High Court last year and an even greater increase in the number of cases brought to the county courts are revealed in the latest judicial statistics.

Last year 164,396 cases began in the High Court compared with 182,620 in 1981 and the number of cases heard in the county courts rose to 2,048,568 from 1,849,260. The change is partly due to the recent rise in the jurisdictional limit of county courts to £5,000 and £15,000 for certain business.

For criminal cases, the number of commitals for trial to crown courts rose to 67,869 (60,539 in 1981) and the courts disposed of 66,186 (61,914) during the year.

The statistics are incomplete, reporting only the business of courts administered by the Lord Chancellor. This leaves out all magistrates courts, which are administered by the Home Office, as well as many tribunals.

A total of 77 justices of the High Court, 339 circuit judges and 456 recorders sat almost 100,000 days in court in 1982. Even so, they dealt only with the tip of the iceberg as most actions brought were settled or given up before they came to a trial.

For example, in the Queen's Bench, where 164,396 writs were issued in 1982, 70,743 cases were disposed of by a judgment without trial—mostly when not defended—and only 12,716 were set down for trial.

At this stage the majority were again withdrawn — only 4,399 cases ended with e judgment after trial.

The use of courts as a threat and a sort of debt collecting agency is even more evident from the county court statistics. Of the 2.3m cases brought there, 2m were "money plaints" and of these 40 per cent for sums of £100 or less.

Judicial Statistics Cmnd. 9065 SO pp.105 £9.10.

INSURANCE

Aiming to get better value from trade associations

BY ERIC SHORT

INSURANCE companies represent one of the largest service industries in the UK, controlling assets in excess of £100bn and with an annual premium income well in excess of £20bn.

The insurance company trade associations, housed in Aldermary House off Cheapside and the adjacent Calico House in the City of London have also grown to a size befitting the industry they represent.

There are now 10 organisations representing various sectors of the insurance industry, almost all of them housed within Aldermary House. They range from the British Insurance Assocation (BIA) and the Life Offices Associetion (LOA) to the Reinsurance Offices Association.

They occupy over 50,000 sq ft of prime office space, employ 320 staff and have an annual budget in excess of £9m, of which Aldermary and Calico House rents account for £1.7m. In addition, insurance company executives spend an estimated 15,000 days a year on the work of the associations.

There is a growing feeling among the insurance company members that they are not getting value for money. Various internal working parties have been looking at ways of effecting economies and of streamlining the decision-making process on important issues.

In particular there is a strong feeling that the industry is fragmented on many important issues and that it does et times lack an effective spokesman to represent the industry to the Government and the public.

There has been concern especially that in recent years the industry has not been able to agree on e major edvertising campaign, nor on a central agency for handling complaints from the pnblic.

The result was that the BIA hired PA Management Consultants to review the structure and consider possible alternatives. Its interim report, which was confidential, was ready in July, but is only just appearing in the media.

Since the report states that one of the priority functions of any association is to represent the industry and its members to the Government, politicians and the public, it seems strange that discussions should be shrouded in secrecy.

PA Management sets out various alternatives for members to consider. They range from maintaining the status quo to having one single fully-integrated organisation under a chief executive covering all functions.

No self-respecting association or organisation these days is without a director-general at its head. The PA Management report does not stray from this established course and recommends that any new structure should have a director-general.

But instead of a forceful personality putting forward the insurance industry's message at every conceivable opportunity, PA Management recommends that the director-general's function would be to head the staff rather than to be such a spokesman.

PA Management estimates that cost savings of 15-20 per cent could be achieved by rationalissation of current staff. This would be done both by pruning activities and moving some staff responsibilities out of Aldermary House. All members agree with this objective.

But when PA Management spells out how this is to be achieved, the opposition begins.

PA Management starts from the premise that insurance is seen by the world outside as one industry. However, mistaken this view is, it says the proposed structure should build on this and not try and change it.

It would like to see e structure with two member grouping—life and non-life—operating within e formal federal structure, with e single permanent staff. But there would be considerable life and non-life specialists among the executive staff.

The opposition comes from the pure or mainly life companies where their work involves them closely with the life associations, but much less so with the BIA.

They claim that the LOA, the Industrial Life Offices Association and the Associated Scottish Life Offices have a completely democratic structure where every member company can express views and influence policy decisions.

They claim that the same cannot be said for the BIA where it is argued that the major composite companies dominate.

They want to maintain the present set-up where the life associations operate quite autonomously from the others. They also feel that the current life association framework is quite satisfactory, though say there is room for rationalisation. These companies have very little interest in what the BIA does. They want effectively two separate organisations.

Indeed ASLO, which is unique in that it is an association of the chief executives of Scottish life companies, and is based in Edinburgh, has said that whatever happens in London, it will continue as before and will not be subordinate to any London-based association.

The timetable is that the associations should decide in principle on what lines the reorganisation should proceed along, as well as set up an action group with PA Management as advisers, to produce detailed proposals.

Life companies, which may object strongly to the proposed reorganisation, may be tempted, at the last resort, to go outside the main association to one or other of the two life associations that operate independently from Aldermary House—the Life Insurance Association and the Linked Life Assurance Group.

APPOINTMENTS

Young Austen & Young

Mr John I. Kilner has been appointed managing director of YOUNG AUSTEN & YOUNG and chairman of its associated companies, Bosworth (Construction Services), Firesnow Protection Services and Young Austen & Young (Electrical). A former board director within the John Laing Group, Mr Kilner was latterly employed by Haden as managing director of its Carrier company.

★

Mr Keith Morris has been appointed western sales director of THE MAGAZINE AND CATALOGUE CORP part of the British Printing and Communication Corp. He has been managing director of Purnell and Sons since March 1982. Purnell will now be under the personal direction of Mr Hugh Lavington, chief executive of the British Magazine and Catalogue Corp. Mr Morris will remain a member of the board of Purnell, and the Magazine and Catalogue divisional board and joins the board of Odhams-Sun.

★

Mr Tony Palston has been promoted to the board of the human resource systems division of software supplier, PACKAGE PROGRAMS.

★

REED STENHOUSE & PARTNERS has appointed Mr Charles Bowman as chief executive of Reed Stenhouse Energy. Mr David Bridges, Mrs Patricia Perkins and Mr Richard Palk have been appointed to the board.

★

Mr J. R. Heaver has been appointed a director of BARRANQUILLA INVESTMENTS. He is also managing director of Granada Properties, a fellow subsidiary of Granada Group.

★

Mr Christopher P. Jenner has been appointed managing director of CAMBRIDGE PETROLEUM ROYALTIES. He was an executive director.

★

DIMA INDUSTRIAL has appointed Mr J. A. Hayward as managing director; Mr H. Dobson as sales director; and Mr A. J. Hayward as financial director.

★

FREMONT INSURANCE COMPANY (UK) has appointed Mr R. E. L. Williams as director and company secretary.

★

Mr Steve Breeze has been appointed managing director of TEFAL UK after 10 years with the company. He was sales and marketing director. Mr Patrick Cogan leaves the company after seven years as managing director to take a new appointment with a rival manufacturer.

★

GRUNDIG INTERNATIONAL, UK subsidiary of the German company, has appointed Mr Michael Walker as sales director. He was sales director with Bush Radio. Promoted to the board as director of marketing services is Mr Tony Mason. He has been with Grundig for over two years.

★

Mr George Carruthers has been elected president of the BUS & COACH COUNCIL. He succeeds Mr William S. Lewis. Four vice-presidents were also elected. Mr Stuart Appleby of R. W. Appleby representing the independent sector; Dr David Quarmby of London Transport Executive, representing the transport executive sector; Mr Charles Evans of Lothian Regional Transport, representing the local authority sector; and Mr Irwin Dalton of the National Bus Company, representing the nationalised sector.

★

Mr John Howorth has been promoted from southern region sales manager of MICRODATA INFORMATION SYSTEMS to the new post of director of sales and marketing.

★

ULSTER TELEVISION has appointed Mr Peter Battle as sales director from November 2. He has been engaged in his own consultancy, Battle Marketing Services, since relinquishing his position in July 1982 with Television South West (TSW) where, as joint managing director, he took a special interest in the business side of the company.

★

Mr G. E. Hall has been appointed a deputy chairman and Mr J. R. Mundy becomes group managing director of BRADBURY WILKINSON.

★

Mr D. T. Cook has joined PERMANITE as general manager from the Chloride Group where he was managing director, Chloride Metals.

★

RESIN TECHNOLOGY CONTRACTS, an associate of the OCS Group, has appointed Mr Mark Liddle as managing director.

★

SVENSKA INTERNATIONAL LIMITED, which recently took over the business of Svenska International in London, has made the following appointments: Mr Lars Evander, managing director; Mr Leif Hedberg, deputy managing director; Mr Jen-Henrik Gladh, director—banking services; Mr Howard White, director — corporate finance; Mr John Ratner, director —Eurobonds; Mr Christopher Weller, director—financial controller; Mr Martin Hankey, associate director — corporate finance; Mr Bo-Erland Jeneberg, associate director — foreign exchange; and Mr David Purvis, associate director — money markets.

★

Mr John Festing, of Singer and Friedlander, has been appointed chairman of CoSIRA's Northumberland Small Industries Committee. He succeeds Lt-Col M. Crossman.

★

Mr David Randall has been appointed systems development director at ALLIED BREWERIES MANAGEMENT (SERVICES), Burton-based management services company of the Allied Lyons Group. He has been with the group for 12 years. Mr Keith Harvey becomes computer operations director. He has been with the company for 20 years.

★

Mr D. G. Watson has been appointed as marketing and sales director of FORD AND WESTON LIMITED. Ford and Weston Limited is a subsidiary of the Ford and Weston Group.

★

Mr Jeremy Mackay-Lewis, senior partner of the Whinney Mackay-Lewis Partnership, has been appointed a non-executive director of ELECTRA RISK CAPITAL, a wholly-owned subsidiary of Electra Investment Trust.

★

United States Filter Crpn (a division of Ashland Oil), has appointed Mr Geoffrey L. Sneddon as managing director of STOCKDALE FILTRATION SYSTEMS of Macclesfield, Cheshire, England and FLUID SYSTEMS EUROPE BV of Almere, Holland. Mr Sneddon was deputy managing director of Mikropul Ducon.

CONTRACTS AND TENDERS

NOTICE
SALE BY TENDER

Assets of Intercontinental Distilleries (St. Lucia) Ltd.
Castries, St. Lucia, West Indies

Notice is hereby given that Bahamas International Trust Company Limited, Trustee in Receivership under the Hypothecary Obligation and Mortgage Debenture dated 29th October 1976 and registered in St. Lucia in volume 129A No. 1142/2 is prepared to receive tenders for the purchase of the mortgaged property comprised of the following Percels:

Parcel 1 All land and buildings exclusive of Parcels 2 to 6;
Parcel 2 One complete distille´on system with capacity of approximately 8,000 imperial proof gallons of 69 O.P. Alcohol per day;
Parcel 3 Processing tanks with approximate capacity for 340,000 gallons Molasses, 200,000 gallons Fermentation Wash, end 120,000 gallons Alcohol;
Parcel 4 General service equipment including one package boiler (24,150 lbs. of steam), electric pumps, compressors etc.;
Parcel 5 Associated laboratory equipment;
Parcel 6 Associated office furnishings, tools end materials.

Tenders ere also invited on one or more of the preceeding Parcels.

The procedure for tendering and conditions of sale, including details of the parcels end the applicable government concessions may be obtained on epplication et the offices of Bahamas International Trust Company Limited, P.O. Box N7766, Bitco Building, Bank Lane, Nassau, Bahamas. Attention: Mr. Hugh Moore or from Mr. William Douglas Rapier, Peat, Merwick, Mitchell end Co., P.O. Box 195, Castries, Saint Lucie, West Indies. Applicants must enclose a self addressed envelope.

The Trustee does not bind itself to eccept the highest or any tender.

Tenders muse be sent in a sealed envelope to arrive before twelve o'clock noon (Local Nassau time) on the 30th day of November 1983 to the Trustee, Bahamas International Trust Company Limited, Box N7766, Bitco Building, Bank Lane, Nassau, Bahamas and the envelope must be merked "Do not open — Tender for Purchase of the Mortgaged Property, St. Lucia." Tenders must be accompanied by e deposit by way of a certified cheque payable to BAHAMAS INTERNATIONAL TRUST COMPANY LIMITED — IN TRUST for 15% of the amount tendered.

The deposit will be returned if the tender is not eccepted. The deposit will be forfeited to the undersigned Trustee as liquidated dameges if the tender is withdrawn prior to the dete on which notice of the eccepance of eny tender by the trustee is deemed to have been received by the tenderer as more fully described in the procedure for tendering. The deposit of a tenderer whose tender has been eccepted will be forfeited as liquidated damsges if the successful tenderer does not complete the sale. The balance of the tender price will be payable at closing.

The assets may be inspected by appointment arranged by contacting Mr. Willism Douglas Repier or Mr. N. P. Husbands, Peat, Marwick, Mitchell and Co., P.O. Box 195, Castries, St. Lucia, West Indies (809) 452-2511, Telex No. 6351 PMM SLU.

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(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES
(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS
(National Oil Exploitation Company)

NOTICE OF NATIONAL AND INTERNATIONAL CALL FOR TENDERS NUMBER 9072.04/MF

The Nationel Oil Exploitation Company (Entreprise Nationale des Travaux eux Puits) is launching an International Call for Tenders for the supply of:

HEXAGONALS KELLYS (Tiges Hexagonales)

This Call for Tenders is intended for Menufacturing Companies only and excludes emalgamations, represeatatives of companies and eny other intermediaries etc. in conformity with the provisions of Law No. 78-02 of 11 Februery 1978 with respect to State Monopoly on Foreign Trade.

Tenderers interested in this Call for Tenders mey obtein the specifications from: Entreprise Netionele des Travaux eux Puits, 2 Rue du Capitaine AZZOUG, Côte Rouge, Hussein Dey ALGER (Algiers) ALGERIE (Algiers), Département Approvisionnement et Transports (Supplies and Transport Department) — with effect from the date on which this Notice is published.

Offers, of which five (5) copies should be prepared, must be sent in a double sealed envelope, by registered post to the Secrétariat du D.A.T. at the above eddress. The outer envelope should not bear any merk which might identify the tenderer, stating simply "APPEL D'OFFRES INTERNATIONAL Numéro 9072.04/MF — Confidentiel — A ne pas ouvrir" (INTERNATIONAL CALL FOR TENDERS Number 9072.04/MF — DO NOT OPEN, CONFIDENTIAL).

Tenders must be received within sixty (60) days from the date on which the present notice is published.

Selection will he mede within 180 deys from the closing date of this Call for Tenders.

OIL & NATURAL GAS COMMISSION

DEPARTMENT OF MATERIALS MANAGEMENT
Gram: 'COMSTORE' Telex No.: 0595255 Tel: Bhavan, Dehra Dun (India)

Subject:
BID INVITATION NOTICE FOR HIRING OF 'ON LAND' OPEN HOLE LOGGING CUM PERFORATION SERVICES ON CONTRACT BASIS FOR WEST BENGAL AND ASSAM

Oil and Natural Gas Commission, Dehra Dun invites Sealed Tenders for Well Logging and Perforation Services on Contract Basis as detailed below:—

Sl.	Tender No.	Tender Fee	Closing Time	Opening Time	Our Requirement by
No. 1.	MATIIMO/GEOPHYI SCON/E-1/842/83	U.S.$1,000.00	Date and 28.11.83 1400 hrs. (1st)	Date and 28.11.83 1500 hrs. (1st)	1.2.1984

The services will initially be for one year with option for ONGC to extend it for another year on the same rates, terms and conditions or to terminate the contract earlier by giving one (1) month's notice without having to assign any reason whatsoever.

Interested Bidders can obtain the Bid documents on written request from General Manager (MM), ONGC, Tel Bhavan, Dehra Dun on any working day, enclosing a Crossed Demand Draft of the said amount as Tender Fee drawn in favour of Secretary, Oil and Natural Gas Commission, Dehra Dun, payable at State Bank of India, Tel Bhavan Branch, Dehra Dun.

Indian representatives of foreign principals can obtain documents against Rupee payment (Rs.19,000) with explicit condition that their principals would substitute the above amount in Foreign Exchange. In case offers are not accompanied with requisite tender fee in U.S. Dollars, the offer is liable to be rejected.

BID BOND:—

A bond for a sum of U.S.$5,000,000 to be enclosed with the bid. In case the bid is for either of the area viz West Bengal or Assam the amount will be half (50%) of the amount prescribed).

Bids from FOREIGN PRINCIPALS will only be considered.

ONGC reserves the right to accept any bid or to reject any or all bid(s) at its discretion without having to assign any reason thereof.

COMPANY NOTICES

Société Nationale des Chemins de Fer Français

£75,000,000
Guaranteed Floating Rate Notes 1993
(redeemable at the holder's option in 1990)

unconditionally guaranteed, as to payment of principal and interest, by

The Republic of France

In accordance with the provisions of the Notes, notice is hereby given that, for the three months period, 20th October, 1983 to 20th January, 1984, the Notes will bear interest at the rate of 9⅝ per cent. per annum.

Coupon No.1 will therefore be payable at the rate of £120.97 per coupon from 20th January, 1984.

S.G. Warburg & Co. Ltd.
Agent Bank

PORTS AUTONOMES
BORDEAUX — DUNKERQUE — LE HAVRE — MARSEILLE — NANTES — SAINT-NAZAIRE — PARIS

Public corporations of the French State incorporated in accordance with the laws dated June 29, 1965 and October 28, 1968

9% BONDS 1976-1991 OF USD 1000 EACH

NUMERICAL LIST
1. of the series including the 4,000 bonds drawn at the second drawing by lot on October 12, 1983, representing the entire annual instalment of USD 4,000,000 to be redeemed as at November 15, 1983:
18,850 TO 23,048
2. of the series previously drawn by lot including securities not yet presented for reimbursement:
Drawing by lot on October 12, 1982—Reimbursement November 15, 1982.
7,129 TO 11,128

These bonds will be redeemable at USD 1,000 at FRENCH AMERICAN BANKING CORPORATION in NEW YORK and at the offices of the following establishments:
— BANQUE NATIONALE DE PARIS — PARIS
— BANQUE BRUXELLES LAMBERT — BRUXELLES
— BANQUE NATIONALE DE PARIS (LUXEMBOURG) S.A. — LUXEMBOURG
— BANQUE INTERNATIONALE A LUXEMBOURG — LUXEMBOURG
— BANQUE DE PARIS ET DES PAYS-BAS — PARIS
— CREDIT LYONNAIS — PARIS
— DEUTSCHE BANK AKTIENGESELLSCHAFT — FRANCFORT-SUR-LE-MAIN
— SOCIETE GENERALE, PARIS
— SWISS BANK CORPORATION — BASLE

Outstanding amount: USD 32,000,000

THE BROKEN HILL PROPRIETARY COMPANY LIMITED
(Incorporated in the State of Victoria)

The Broken Hill Proprietary Company Limited announces that a half-yearly dividend of twenty cents per share (being at the rate of 20 per cent per annum on the issued capital of the Company) will be paid on 30th November 1983 in Australian currency. Resulting fractions of one cent in dividend entitlements will be paid to the next whole cent above.

The books closing date fixed by the Company for the purpose of determining the persons entitled to the dividend is 28th October 1983. Transfer will be accepted for registration until 5.00 p.m. on that date at the company's share registers at the following addresses:

Australia—
Melbourne, 148 William Street.
Sydney, 20 O'Connell Street.
Adelaide, 41-47 Currie Street.
Canberra, Arthur Young and Company, 48 Marcus Clarke Street.
Hobart, Perpetual Trustees and National Executors of Tasmania Limited, 29 Murray Street.
Brisbane, 344 Queen Street.
Perth, 37 St. George's Terrace.
U.K.—
London, 14 Hanover Square.

FONDS DE REETABLISSEMENT DU CONSEIL DE L'EUROPE POUR LES REFUGIES NATIONAUX ET LES EXCEDENTS DE POPULATION EN EUROPE

Principal Office:
67088 STRASBOURG (France)
Headquarters of Operational Services:
55, avenue Kléber, 75116 PARIS

SECOND NOTICE TO HOLDERS OF BONDS 13.58% 1982-1992 OF ECUS 1,000 EACH AND TO HOLDERS OF BONDS 11⅝% 1983-1995 OF ECUS 1,000 EACH

The holders of international bonds 13.50% 1982-1992 and the holders of international bonds 11⅝% 1983-1993 issued by Fonds de Réétablissement du Conseil de l'Europe pour les Réfugiés Nationaux et les Excédents de Population en Europe who were called for October 18, 1983, being unable to meet validly for lack of quorum, are again convened to an Ordinary General Meeting, at 58, boulevard Haussmann, Paris 9e (France) on November 7, 1983:

— at 3 p.m. for the holders of international bonds 13.88% 1982-1992

— at 3.30 p.m. for the holders of international bonds 11⅝% 1983-1993 in order to consider the same agenda as the one for the first meeting, that is:

— Appointment of the bondholders' permanent representatives, designation of the substitute representatives.

— Determination of the bondholders' representatives' powers and of the remuneration given to the permanent representatives.

To permit the bondholders to attend or to be represented at these meetings, the bonds or their deposit receipts, must be deposited at least five days before the date fixed for the meeting, at the offices of the banks having participated in the placing of these bonds and from whom proxies or admission cards can be requested.

THE GOVERNING BODY

MOTOR CARS

LEGAL NOTICES

NOTICE OF MEETING OF CREDITORS WALLBOND (GREAT BRITAIN) LIMITED

NOTICE IS HEREBY GIVEN, pursuant to Section 293 of the Companies Act, 1948, that a meeting of the Creditors of the abovenamed Company will be held at 40 Highgate West Hill, London, N6, on Tuesday, the 8th day of November 1983, at 11.30 o'clock in the forenoon, for the purpose of having a full statement of the position of the Company's affairs, together with a List of the Creditors of the Company and the estimated amount of their claims, laid before them, and for the purpose, if thought fit, of nominating a Liquidator and of appointing a Committee of Inspection.

NOTICE is also given that, for the purpose of voting, Secured Creditors must (unless they surrender their security), lodge at the Registered Office of the Company at 26 Bridge Street, Hitchin, Herts., before the Meeting a Statement giving particulars of their Security, the date when it was given, and the value at which it is assessed.

Dated this 14th day of October 1983.
By Order of the Board of Directors,
MICHAEL BIRKS GODFREY,
Director.

INTERCOM
SOCIETE INTERCOMMUNALE BELGE DE GAZ ET D'ELECTRICITE
Limited Company

Registered Office:
B-1000 Brussels (Belgium),
place du Trone 1

The Board of Directors at their meeting of September 26th, 1983 decided to convene an extraordinary general meeting of the shareholders for November 8th next; however, if the quorum of shareholders present is not reached, a second meeting will be convened for November 25th. Shareholders will be asked to approve a capital increase amounting to not less than BF 3,664,032,860, nor more than BF 4,564,909,825 by the creation and issue for cash of new shares of a number not less than 2,724,188 nor more than 3,393,985.

These new shares would be issued at a price of BF 1,345 each plus a premium to be fixed by the general meeting at such level that the subscription price, payable in full on subscription, would not exceed BF 2,000.

The proposals which will be made to the meeting about the issue price and the proportion between the shares to be issued and the existing shares, as well as the reason for them, will be published a few days before the meeting.

The new shares will participate in any distribution of profits with effect from January 1st, 1984. They will be offered for public subscription from December 6th to 20th, 1983, as follows:

—(a) a minimum of 2,679,188 and a maximum of 3,348,985 shares to the owners of the 28,791,888 existing shares, who will be entitled to subscribe preferentially and by way of rights (represented by coupon no. 32) in the proportion to be fixed by the general meeting. This proportion will be between one new share for every ten old shares and one new share for every eight old ones;

—(b) 45,000 shares to the members of staff who will be entitled to subscribe, without preference right, at the same price and terms as those fixed for the owners of the existing shares.

In order to take advantage of certain Belgian taxation concessions it is proposed that Electrobel will take up all those new shares which have not been subscribed for by the end of the public subscription period, on condition that applications to take up rights subsequently received by due presentation of scrip certificates will be satisfied out of shares taken up by Electrobel.

The proceeds of the capital increase will be devoted to financing part of the investment programme of the Company.

COMPANY ANNOUNCEMENTS

Tullett & Tokyo Fox International Ltd.

announce the following changes in their management structure:—

Alan J. Styant has been appointed Managing Director of Tullett & Tokyo Foreign Exchange Co. Ltd. replacing Michael E. Rowley who becomes Joint Managing Director of Futrend together with George Smeed.

EXHIBITIONS

THE BURLINGTON HOUSE FAIR. The Antique Dealers' Fair, Royal Academy of Arts, Piccadilly, London, W1. 20-29 October, 11 am-7 pm. Admission £3 including handbook.

CLUBS

EVE has outlived the others because of a policy of fair play and value for money. Supper from 10-3.30 am. Disco and top musicians, glamorous hostesses, exciting floorshows. 189, Regent St. 01-437 0557.

ART GALLERIES

THE CLARENDON GALLERY, 8, Vigo St. 01-439 4557. Jointly with THE PARKIN GALLERY, 11, Motcomb St., SW1. 01-235 8144. "ARTISTS OF THE YELLOW BOOK AND THE CIRCLE OF OSCAR WILDE." 5 Oct-31 Oct, Clarendon Gallery; 5 Oct-5 Nov, Parkin Gallery.

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THE WEEK IN THE COURTS

Filtering politics out of Mercury dispute

ONE JUDICIAL swallow does not make a summer of trade union immunity, although the decision of Mr Justice Mervyn Davies in *Mercury Communications Ltd v Stanley and another** does demonstrate how difficult it may be for the courts to disentangle genuine trade disputes between employer and employee from the undertones of political motivation of the employee's trade union officials.

There can be little doubt that the Government, in framing the terms of the Employment Act 1982, expected that any union which ordered industrial action over anything other than wages and conditions of service involving anyone other than the direct employer would not be able to claim immunity from legal action. More particularly, it was hoped that even the slightest hint of political motive would vitiate the limited immunity conferred on trade unions.

The Post Office Engineering Union had unquestionably conducted (and was continuing to conduct) a campaign against the plans of the Government to privatise and liberalise the telecommunications system. The essential question that arose for the court's determination was whether the industrial action taken by workers employed by British Telecommunications, in refusing to connect the telecommunications of BT with those of Mercury, which was an actionable wrong of inducing breaches of contract, was nevertheless a "trade dispute" and entitled to immunity from legal suit. When BT ordered its workers to connect up in June 1983, in the midst of the campaign against privatisation, what was the reason for the workers' refusal?

It was claimed by the engineers employed by BT, that the refusal was a protest that the connection to Mercury would lead to Mercury (and other companies that might enter the telecommunications business in the future) doing work now done by BT, and thus form the first step towards the loss of jobs. Hence there was a trade dispute between the engineers and BT relating "wholly or mainly" to termination of employment. Hand in glove with that concern was the realisation that the industrial action in furtherance of the trade dispute helped to promote trade union opposition to privatisation.

The retort by Mercury was that in reality the refusal to connect the two communications systems was part and parcel of the campaign against the Government and Mercury. It was pedantic and lacking in political reality to separate the campaign against privatisation and liberalisation. The difficulty about that argument was that it imported the political campaign of the past two years with the industrial action taken in June 1983, when connection was ordered.

No doubt the Post Office Engineering Union welcomed the order from BT to its workers as a godsend in its political campaign. It was able to use the occasion for industrial action against an order of the employer as an instrument that would incidentally assist its overall objective against government policy for the future of the industry.

Mercury was able to produce evidence of a report of a special conference of the Post Office Engineering Union in September 1983 which indicated a purpose wider than just opposition to the Telecommunications Bill now passing through its legislative stages in Parliament. But that did not detract from the fact that there was fear of job losses resulting from connecting the telecommunications.

One factor remains important: Mercury was seeking an interlocutory injunction against the union officials. At this stage in the litigation the evidence that could be adduced may have been limited by the time available for acquiring it. On the evidence at this stage before the judge, he thought that the union officials would be likely to maintain their entitlement to the defence that they were acting in furtherance of a trade dispute.

That is not to say that when the matter comes for trial the picture may not look a little different. The Court of Appeal, which may hear within a few weeks the appeal against last week's decision, may see the issues in a different light. That remains to be seen.

Is there anything that the Government might do by the way of amendment to the legislation that would assist the courts in preventing genuine trade disputes from being used to disguise the underlying political motivation of the trade unions?

The law requires the court, in testing whether the action is in "contemplation of furtherance" of the dispute, to look at the behaviour of the trade union officials.

In a series of cases under the earlier trade union legislation of the 1970s, the House of Lords ruled that the expression "in furtherance of a trade dispute" referred to the subjective mind of the person doing the act. It meant that the person doing the act with the purpose of helping one party to the trade dispute to achieve his objectives need only show that he had an honest and reasonable belief that it would achieve that objective. The court would always ask itself whether a reasonable man could have thought that what he was doing would support his side of the dispute, or whether the link between his actions and his purpose was so tenuous that his evidence was not believed.

The question is a very limited one: is the trade union official to be believed when he says that he acted in contemplation or furtherance of a trade dispute?

Once it is shown that a trade dispute exists, the person who acts in furtherance of it—not the court—is the judge of whether his acts will further the dispute. If he is acting honestly, Parliament has left him the choice of what to do. The judges have said that they are glad that Parliament has not thrust on them a wider power of judicial review of the conduct of trade union officials.

But would it be such an embarrassing task if judges were called on to review the tactics of a party to a trade dispute, and to have to determine whether in the court's view the tactic employed was likely to advance that party's side of the dispute, or was simply a penumbra for political motives?

So far, Parliament has adhered to the doctrine that issues in the industrial arena should be kept as far as possible out of the judicial forum.

Some judges have nibbled at the idea that the courts should investigate whether the act done is reasonably capable of achieving the party's objective in the dispute. But that approach has not received either the imprimatur of the House of Lords or the legislature. But Parliament might be asked in the future to provide that courts should act as a kind of back-seat driver in trade disputes.

If decisions such as that given by Mr Justice Mervyn Davies become the rule rather than an isolated exception, we might yet see the courts performing the function that the present Government would like to curb further the activities of trade unions.

Justinian

*Times Law Report, October 22, 1983.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

BOARD MEETINGS

Finals:
Border and Southern Stockholders Tst.
Highland Distilleries
Japan Assets Tst.

Interims:
Bishopsgate Tst.
Reed Exec.

DIVIDEND & INTEREST PAYMENTS—
AGB Research 4.2p
B.A.T. Stores 4¼pcLn. 2003-05 2⅛pc. Do. 6¼pcLn. 2003-08 3⅛pc. Do. 7⅞pc Ln. 2003-08 3.9375pc
Cardiff City Council 11pc 1986 5½pc
Costain 5.5p
Don Bros. Buist 2.25p
IMI 1.5p.
Lambert Howarth 1.5p
Scottish Eastern Inv. Tst. 1.5p

COMPANY MEETINGS—
Amal. Ests. Gt. Eastern Hotel, Liverpool Street, EC. 10.30
Apex Props., 243-247 Pavilion Road, Sloane Square S.W., 12.00
Fashion and General Inv., Gt. Eastern Hotel Liverpool Street, E.C., 12.00
Fleming Overseas Inv. Tst. P & O Building, 122 Leadenhall Street E.C., 11.30
Imry Prop. Connaught Rooms, Great Queen Street, W.C., 12.00
Ramar Textiles, Hyde Park Hotel, Knightsbridge, S.W. 12.00
Worthington (A. J.), Portland Mills, Leek, Staffs. 11.00

BOARD MEETINGS

Finals:
Fairview Ests.
New Australia Inv. Tst.
Peachy Prop.
Samuel Props.

Interims:
English Nat. Inv.
First Charlotte Assets Tst.
Francis Inds.
Hamilton Oil Gt. Britain
Kwik-Fit (Tyres and Exhausts)
O.K. Bazaars (1929)
Richardsons Westgarth
Runciman (Walter)
The Times Veneer
Wace

DIVIDEND & INTEREST PAYMENTS—
Bank Bumiputra Malaysia Berhad Fltg. Rate Nts. 1984 $49.24
Bankers Tst., New York 56.25 cts.
Blundell-Permoglaze 6½pcPfd. 2.275p
CPC Intnl. 55 cts.
Exchequer 11 per cent 1991 5½pc
Fashion and Gen. Inv. 7p
General Elec. 47.5 cts.
Manufacturers Hanover 76 cts.
Merchants Tst. 1p
Nat. Westminster Finance BV Gtd. Fltg. Rate Cap. Nts. 1992 $244.64
Nationwide Building Society 10¹⁄₁₆Bds. 30.4.84 ⁵⁄₃₂ pc
Newbold and Burton 1.54p
Spencer (George) 0.1p

WEDNESDAY OCTOBER 26

COMPANY MEETINGS—
Assctd. Dairies, Headingly Pavilion, St. Michael's Lane, Leeds 2.30
Bogod-Pelepah, High Holborn House, 52-54 High Holborn, W.C., 12.00
Sirdar Flanshaw Lane, Alverthorpe, Wakefield, 12.00
Zetters, Clerkenwell Conference Centre Clerkenwell Green, E.C., 11.30

BOARD MEETINGS

Finals:
British Assets Tst.
Dixon (David)
Gaunt (Rowland)
TR Australia Inv. Tst.

Interim:
Advance Services
Avana
Boosey and Hawkes
Border Brews. (Wrexham)
Foster Bros. Clothing
Gill and Duffus
Henderson Grp.
TR Natural Resources Inv. Tst.
Wire and Plastic Prods.

DIVIDEND & INTEREST PAYMENTS—
Apex Props. 1.3p
Provident Financial 3p

THURSDAY OCTOBER 27

COMPANY MEETINGS—
Cantors, 164-170, Queens Road, Sheffield, 12.30
Datastream, Butchers Hall, 87 Bartholomew Close, E.C. 10.00
Harrburger Brooks, Meadow Lane, Long Eaton, Nottingham, 12.00
Kwahu, 25.35 City Road, E.C., 12.00
Neepsend, Kenwood Hall, Kenwood Road, Sheffield, 12.15
Renwick Renwick House, Brixham Road Paignton, Devon, 12.00
Saville Gordon (J.) Midland Hotel, New Street, B'ham., 11.00
Walker (James) Goldsmith and Silversmith 1, Glendale Road, S.W., 12.00

BOARD MEETINGS

Finals:
McKechnie Bros.
Manganese Bronze
Simpson (S.)
Stewart and Wight
Stocklake
Walker and Homer

Interims:
Allied Leather Inds.
Barlows
Coats Bros.
De Vere Hotels and Restaurants
Feb Intnl.
Hay (Norman)
Hill (Philip) Inv. Tst.
1928 Inv. Tst.
Portsmouth and Sunderland Newspapers
Toshiba
Utd. Ceramic Distributors
Weeks Associates

DIVIDEND & INTEREST PAYMENTS—
Barlow Rand 6pcPf. 6pc
Bogod-Pelepah 0.2p, Do. A Rst. V 0.4p
Camellia Invs. 4p
Dickie (James) (Drop Forgings) 1.5p
Exchequer 15pc 1997 7.5pc
Grindlays 5.6p
Grupo Industrial Saltillo SA Fltg. Rate Nts. 1988 $295.76
Jebsons Drilling 3.5p
Moben 0.25p
Tilbury 1.3p

FRIDAY OCTOBER 28

COMPANY MEETINGS—
Lawrie Plantation, 1 Hobart Place, S.W. 11.00
Sheldon Jones, Royal Bath and West Showground Shepton Mallet, Somerset. 12.00
Smith Bros., Institute of Chartered Accountants, Moorgate Place, E.C., 12.15
Whitworth Electric, Great Western Royal Hotel, Paddington W 3.00.

BOARD MEETINGS

Finals:
Burgess Prods.
Ulster TV

Interims:
Aero Needles
Causton (Sir Joseph)
Clayton, Son
Cole
G.T. Global Recovery Inv. Tst.
Hopkinsons

Parliament this week

TODAY

Commons: Prevention of Terrorism Bill, Second Reading.

Lords: Data Protection Bill, business motion on amendments to schedules. Foster Children (Scotland) Bill, Second Reading. Data Protection Bill (Report). Code of Local Government Audit Practice for England and Wales, 1983. Motion for approval.

TOMORROW

Commons: Tenants Rights (Scotland) Bill (Second Reading). Motions on the British Gas Corporation (Transfer of Shares of Subsidiaries) Order, the Gas Act 1972 (Modifications) Order, and the Further Disposal of Offshore Interests Directions 1983.

Lords: Debate on motion to take note of the statement on 1983 Defence Estimates.

Select Committee: Ginns and Gutteridge, Leicester (Crematorium) Bill.

WEDNESDAY

Commons: Supply Day debate on National Health Service.

Lords: Debate on motion to call attention to the relations between central and local government.

Select Committee: Ginns and Gutteridge, Leicester (Crematorium) Bill.

THURSDAY

Commons: Motion on the Civil Defence (Grant) and (General Local Authority Functions) Orders for England and Wales; also for Scotland.

Lords: Occupiers' Liability Bill (Committee). Equal Pay (Amendment) Regulations — Motion for Approval. Merchant Shipping (Miscellaneous Provisions) Bill (Committee). Lotteries (Amendment) Bill (Committee). British Museum Act 1963 (Amendment) Bill (Second Reading).

Select Committee: Ginns and Gutteridge, Leicester (Crematorium) Bill.

FRIDAY

Commons: Debate on the Civil Service on motion for the adjournment.

TECHNOLOGY

EDITED BY ALAN CANE

THE 'INTEL OF BIOTECHNOLOGY' STAKES ITS CLAIM

Why Centocor gets the 20% it asks for

BY DAVID FISHLOCK, SCIENCE EDITOR

Michael Wall (top) and Hubert Schoemaker

CENTOCOR, a new U.S. biology venture with fewer than 100 people at Malvern on the outskirts of Philadelphia, was set up in 1979 to invent tha "critical components" of new health-care systems. It likens its role to that of Intel and its latest chips, the key parts that make it indispensable to designers of advanced electronic systems.

Centocor asks for—and gets—20 per cent of the selling price of the health-care system.

"Executives tend to fall out of their chairs," admits Mr Michael Wall, Centocor's chairman. "But it is not negotiable. It is the only thing that is not negotiable."

His job, and that of his hard-driving young chief operating officer, Dutch-born Dr Hubert Schoemaker, is to persuade the big pharmaceutical groups that the 20 per cent is not a royalty but for a critical component it can obtain from no other source. "We need to see $20m-30m for Centocor in a prodnct," Shoemaker says. But he claims that "very large companies are extraordinarily receptive to our products." Partners in joint ventures includa Warner-Lambert, FMC and the French Atomic Energy Commission.

Wall and Schoemaker created the new company as a research team operating right at the frontiers of biotechnology. Wall is the strategist and ambassador; Schoemaker runs the business. Wall, founder of Flow Laboratories, a $100m company engaged in tissue culture and instruments, says he had the urge to start again from scratch, so that he could follow tha commercial development of a new technology from the outset. "We think it is the greatest fun to follow a technology."

The idea is that Centocor itself shall stay very small, and shall transfer its science to companies already established in health-care. Wall believes the health-care industry today has excess production and distribution capacity and is urgently seeking major new products.

He sees such companies as potential partners. FMC, for example, has already committed $12.5m to a joint venture with Centocor to try to exploit some novel ideas in immuno-regulation which could lead to dramatic changes in the treatment of such diseases as arthritis.

Wall and Schoemaker see their main jobs as "managing the large partners"—they even train salesmen for the partners for example, for Warner-Lambert which wanted Centocor's critical component for a test for hepatitis B—and finding fresh targets for their researchers.

The *sine que non* of the target must be that it represents major innovation. Wall says he would be "laughed out of the office" if he ever tried to get 20 per cent for a me-too product such as the new pregnancy tests flooding on to the U.S. market from the new biotechnology companies, or even such non-specific immuno-regulators as the interferons.

Specificity is the key. Centocor began life on the campus of the University of Pennsylvania in Philadelphia, in what Schoemaker calls a "motel for start-up companies". Also on the campus is the Wistar Institute, an independent and reputable medical research centre with a strong emphasis on cancer. Through its director, Dr Hilary Koprowski, Wistar offered the new company product patents on certain applications of monoclonal antibodies, the British invention of the mid-1970s which the Medical Research Council had failed to patent.

One was an antibody highly specific to cancer of the pancreas and upper gastro-intestinal tract. Centocor brought it to the market last year, in the form of a radio-immunoassay for early detection. It has high hopes that the test may prove acceptable as a way of screening populations at risk from these tumours.

Another such assay was culled from the work of the Dana Farber Cancer Institute in Boston, which had developed a monoclonal antibody that proved highly specific to ovarian cancer. But this one may have therapeutic value, too, for a just-published research paper suggests that cancer of the ovaries responds favourably in most cases to its use. In any event, there are high hopes both at Wistar and Centocor that the specificity of monoclonals might be combined with chemotherapy to produce drugs designed to treat a particular tumour.

Centocor's own laboratories have found another exciting type of antibody, to Gram negative bacteria such as *E. coli* and *Salmonella*. It is optimistic about showing that they might be used to treat such infections.

Wall says he would be "laughed out of the office" if he ever tried to get 20 per cent for a me-too product

Earlier this month Centocor announced that it had negotiated a joint venture with Warner-Lambert to distribute another of its monoclonals, an enzyme immunoassay test for the hepatitis B virus. It claims that the test picks up cases missed by other tests because the virus is "hidden" in immune complexes. The hepatitis B test market worldwide is put at $100m with more than 1m new cases of infection diagnosed each year. The company is discussing four different product configurations for this antibody.

To protect its position, Centocor always retains the cell line and hence the knowbow for manufacturing the "critical component." When it negotiates a partnership for an antibody, it looks to the partner to maximise market opportunities by exploring the various possibilities for using the monoclonal antibody.

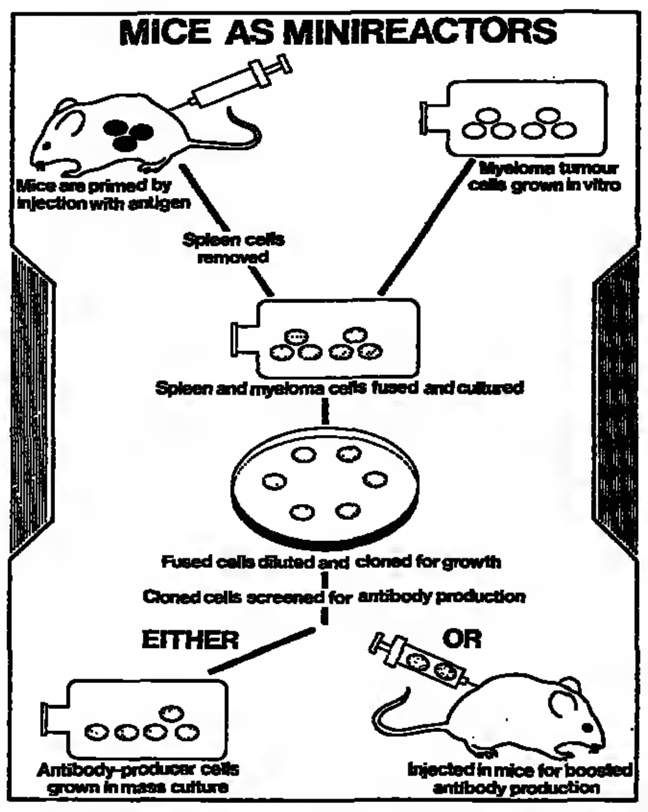
Likewise, it is happy to exploit other people's expertise in scaling up the manufacture of a monoclonal. "The cheaper we can make it, the happier we are," as Wall puts it. Two years ago it recognised that the British company Celltech, armed with covetted MRC inventions, was an international centre of excellence in the manufacture of monoclonals. Centocor has used Celltech extensively, both to explore problems of scale-up from manufacture in mice as "mini-reactors," and to make commercial qualities — hundreds of grams at a time—of Centocor monoclonals.

In his experience, Celltech is still the only company successfully to master mass culture of monoclonal antibodies, Wall says.

But Centocor is anxious to be seen as a biotechnology company with much wider interests than monoclonal antibodies—just one technique of genetic engineering. Its own research programme, under the direction of Dr Vince Zurawski, another founder-director, is running at more than $3m a year. Zurawski is a PhD chemist who says he's become "very clinically orientated."

The imaging of diseases in a way the doctor can clearly and unambiguously assess is one important range of targets. Ha is working on ways of combining highly specific monoclonal antibodies with other chemical agents. For example, ha has a combination which binds only to dead myocytes and thus can provide a vivid colour image of parts of the heart which have died following a heart attack.

MICE AS MINIREACTORS



The hybridoma technique for making monoclonal antibodies starts with a mouse as the "mini-reactor" or incubator. When injected with antigen, the mouse's spleen responds by producing a cocktail of antibodies, each one the prodnct of its own specific cells. The spleens are removed and mashed to release the immunised cells. Then they are mixed with a fast-reprodncing cancer-type cell called a myeloma cell. Under the right conditions—specific to each union—the antibody-makig cell fuses with the myeloma cell to make a hybridoma.

OFFICE AUTOMATION

Now the telephone with intelligence . . .

BY GEOFFREY CHARLISH

IF YOU are a senior executive and if £1,200 will not burn a hole in the budget, then a new exectitive instrument from Standard Telephones and Cables offers an interesting combination of intelligent telephone, electronic diary, address book, calculator and notebook.

STC says it conducted extensive market research before the design was finalised, with Department of Industry support for the field evaluation.

The result is a desk-top unit called Executel which can lend a useful hand in organising the executive's activities and allow calls to be made to any of the people involved at the touch of a button.

Executel has a full-sized keyboard, a 5-in monochrome screen (24 rows of 40 characters), a back-up memory cassette, and a handset for use when private rather than the instrument's normal "loud speech" conversations are called for.

The directory can store up to 255 full-screen entries of names, addresses, phone numbers and other customer or client data.

From these entries, listings can be obtained. For example, all the suppliers of a particular prodnct or all the brokers or airlines that have been entered can be displayed on tha screen together, as could all the in-house staff, say in a particular branch or division.

Tha number of any contact in tha directory can be dialled automatically, and there are rapid dialling facilities for up to 19 of the numbers that are most frequently used.

Entries to the diary are easily made from the standard typewriter keyboard and with commonly used words like "meeting" or "lunch," only the initial letter need be typed.

Ample space is provided for daily entries and as they are made, the system compiles a monthly planner "grid" which shows all the days of the month with clear indication of the free and engaged periods.

Executel can also access the BT Gold service by which messages can be typed to remote correspondents and the replies received on the screen via an electronic mail drop box. The Prestel service can also be accessed.

Prodnction is already under way at the STC Brighton plant and the company expects to be selling Executel, and an associated secretarial unit, early next year. At the moment approval from the British Approvals Board for Telecoms (BABT) is for connection to direct lines only, but similar approval for PABXs is expected soon. More on 01-368 1234.

. . . and the computer with a telephone

BY PAUL WALTON

XEROX HAS launched the first in a line of portable computers, with tha smallest weighing in at five pounds.

The 1800 family inclndes the 8-bit 1810 portable system and the 1805 processor which comes without a screen, both of which can fit into a briefcase and run CP/M-based software packages.

The larger 1845 model, the base station can support more powerful operation of the portable computers when they are connected to it by running 16-bit MS-DOS software in addition to CP/M. There is also an 1845 disk unit which expands the systems storage capacity.

The 1810 portable has a high resolution flat screen and can run for up to 10 hours on its own rechargeable nickel-cadmium batteries. Both it and the 1805 are sold with pre-programmed applications such as spreadsheets and business graphics which are stored in Rompacks which simply plug into the back, with more promised for the future.

Both come with built-in features such as an appointment calendar, an alarm clock, calculator, a speaker telephone with automatic dialing, tape editor for word processing and tha Microsoft Basic programming language.

Xerox is selling the 1800 range both through retail outlets and by mail order.

Testing

Shaking Skynet 4 and Unisat

SDRC, the General Electric (U.S.) affiliate at Hitchin, Herts., specialising in mechanical engineering consultancy, has been awarded a contract by British Aerospace to conduct modal (vibrational) qualification tests on the Skynet 4 communications satellite and on Unisat, which is being designed and constructed for use by the BBC and British Telecom.

The tests will be used to confirm the validity of finite element mathematical models that describe the dynamic behaviour of the spacecraft. The models are used by the launch authority in a coupled analysis to determine how the launch vehicle and satellite interact under launch conditions.

Domestic science

Designing kitchens by computer

CLAIMED TO be the cheapest kitchen design software to run, aptly enough, on the Apple IIe computer is KDS 5000 from Amicus Computing.

Tailored kitchens can be designed by entering a room's dimensions and calling up standard units from memory, fitting them together by means of a joystick which will move them around on the screen. Computer aided design allows the kitchen to be viewed from every angle, even under the sink where piping must be allowed for.

Amicus claims that for around £6,450 it is selling a cheaper system than competition from Olivetti or Kienzle. More on 0452 27802.

هكذا من الأصل

BUILDING AND CIVIL ENGINEERING

RAILWAY CONSTRUCTION

Electric trains for Dublin

THE FIRST railway line in Ireland—and one of the first in the world—was built between Dublin and the fashionable port of Kingstown.

Next year the same stretch of line—although Kingstown is now Dun Laoghaire—will form part of Ireland's first electrified rail line.

Work is almost completed on electrification of a 25 mile stretch of double track linking Howth to the north of Dublin with Bray on the south, end serving 26 suburban and city centre stations.

The cost of the project is currently estimated at I£117m, compared with an original estimate of I£46m when the project began in 1979. The final cost is likely to be somewhat higher. As well as inflation and sharp increases in VAT retes during

BY ALAN ELLIS AND BRENDAN KEENAN

the project, the state transport anthority, CIE, has had to allow I£130m in interest charges on borrowings.

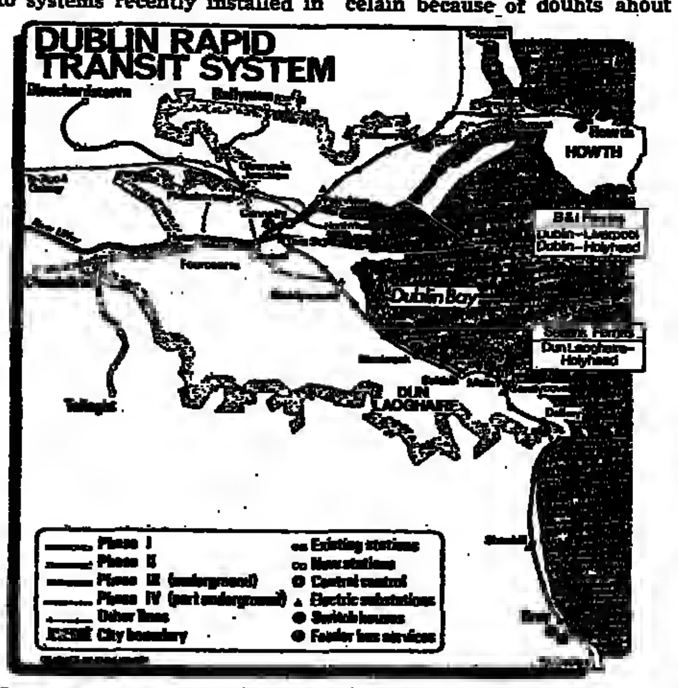
CIE, which has an annual deficit of about I£100m, made its original costings on the basis that the exchequer would fund the project hy way of non-repayable grants. A hard-pressed Irish Government was unable to agree, and the scheme has been funded through borrowings, mostly from the European Investment Bank.

This difference could be crucial when it comes to assessing the success of the plan. The new electric trains will run every five minutes at peak hours, with feeder buses to serve the stations. CIE will need to triple the number of passengers using the present, antiquated diesel trains.

First, though, the company must negotiate an agreement to operate the one-man trains with the three unions which represent railway staff and drivers, as well as other unions involved. Officials remember the difficulties in the UK over the St Pancras to Bedford service. Similar difficulties could delay the planned introduction of the new trains early next year.

The four-year project involved major work on 40 bridges, including 30 which had to be raised or rehuilt. All stations are being upgraded and two new ones were built, at Sandymount and Salthill.

The electrification system is overhead contact at nominal voltage of 1500 volts DC, similar to systems recently installed in



Newcastle on Tyne and Hong Kong. Among the arguments put forward for the expensive electrification system was the fact that electric multiple unit trains (EMUs) have regenerative hraking.

This converts kinetic energy into electricity which is fed back to the overhead line and gives energy savings of up to 20 per cent compared with other systems.

The Howth-Bray line must be one of the most attractiva city links anywhere, skirting the shores of Dublin Bay for most of its length and finishing on a spectacular piece of Victorian engineering built into the cliffs above Killiney.

But all this scenery posed problems for the engineers who had to guard against the salt breezes. The EMUs had to be protected, structural steelwork was well-galvanised before painting, and aluminium was not used in overhead conductors. Supporting insulators are of porcelain because of douhts about tha ability of a recently-developed epoxy resin to withstand salt erosion.

The only contract for which figures were pnblished was tha I£42m deal with GEC of Manchester and Linke Hoffman Busch of Salzgitter, West Germany, for the rolling stock, which cost about I£1m per unit.

Overhead line equipment was from Siemens, in a West German-Irish consortium. Substation equipment is by Jeumont Schneider of Champagne-Sur-Seine, France, in a consortium with Irish companies ACEC and Kent.

Most of the design was the responsibility of Mott Hay and Anderson, consulting engineers, Croydon, with John B. Barry and Partners of Duhlin. At peak construction 1,700 people were employed.

A completely new signalling system was built for the line by Wabco of Pittsburgh, U.S. It has lineside signalling for the diesel mainline trains which will use the track, end in-cah signalling for the EMUs. If a driver fails to obey a signal the train stops automatically—a system which would probahly have prevented the recent fatal crash at Kildar. The system is remotely operated from Connolly station in Dublin City centre.

For CIE the project is only the first phase of a four-phase plan which would give Dublin a repid rail transit system over thet next 12 years. The second phase would involve a new 16 km line to the sprawling new towns to the west of the city, which house 400,000 people. In the third phase this line would be linked to the Howth-Bray line via an underground railway in the city centre.

A fourth phase would build new line tn the northern suhurbs and link up with the existing systems.

It would be a valuahle asset for a city which is the fastest-growing in Europe and whose population is expected to reach 1.3m by 1990. If the plan were funded on the same basis as the present phase 1, tha total cost at 1983 prices could be over I£600m.

Even over 12 years, this is a frightening sum for a government with an annual borrowing requirement of over I£1.5bn. If it is ever to get further than the planner's drawing board it will be because the present scheme persuades Dublin commuters to abandon their cars and because the city's growth leaves little alternative.

Outlook gloomy, say builders

HOPES OF a sustained recovery in the UK building industry suffer a further blow today in a deeply pessimistic report published by the National Federation of Building Trades Employers.

For the first tima this year The NFBTE's latest State of Trade study reveal that in sectors nther than housebuilding and repair and maintenance those reporting a fall in the level of enquiries (31 per cent) now outnumber those enjoying an increase (20 per cent).

The new report, based on a sample of 500 member companies, points to a slight increase in activity nver the year as a whole, with 38 per cent of respondents expecting an nparturn in output against 32 per cent expecting a fall. However, NFBTE analysts believe this improvement is largely due to first quarter results.

Output has now levelled off, the Federation says, with 60 per cent nf companies reporting no change in the third quarter. In the depressed North West, builders are predicting a continued fall in output on last year.

Public sector demand is particnlarly depressed with companies reporting falling enquiries against those enjoying increases now at a three to one ratio.

The NFBTE report reflects similar patterns published in the August construction new orders figures released last week by the Department of the Environment. The industry is particularly concerned over the Government's plans to reduce spending on home improvement grants and rumours of Treasury plans to rednce local authorities capital spending funds.

IVO DAWNAY

Uncertain future for building research

Mira Bar-Hillel looks at the Building Research Establishment

THE BUILDING Research Establishment is in trouble. Since 1976 it has lost about 40 per cent of its staff—and as much as 70 per cent of its seedcorn, the younger recruits.

Researchers now fear that the unkindest cut is yet to come—with the tightening grip of the Department of the Environment on it, there is a feeling that the very reputation of BRE as an independent and authoritetive scientific body is being put et risk.

Earlier this year the Environment Secretary rejected the recomendation of the Resarch Strategy Committee of the huilding and civil engineering EDCs that a Board of Management be establisbad for BRE. After more than a year of deliberation, DOE decided that such a step would give tha research station too much independence. But another conclnsion of the committee that could not be discarded was that the nation needed BRE: "The commercially independent national capability provided by BRE is now even more important than before . . . we firmly believe that tha Government must continne to play a major part in funding research."

That strong view at least relieved BRE of the spectre of full privatisation which had been hanging over it since Michael Heseltine first raised the possibility. It is now accepted that, while the station may ettract private contracts, its basic programme "if it is to command acceptance . . . needs to be assessed independently of its commercial sponsors."

But that did not stop the process of tinkering. Its latest manifestation was the Rayner Team report. Alongside recommendations like privatising the cleaning at BRE, Rayner suggested as a priority that all publications must be charged for. This is due to happen next April. In consequence circulation of some research results will drop hy as much as 75 per cent; instead of sending them out free with professional journals, BRE will bave to rely on subscriptions for its digests and defect action sheets.

To make matters worse, to enable subscriptions to be accepted, hoth publications must in future be produced not when material is available, hut reguarly, once a month, ready or not. The researchers find this scientifically unacceptable.

Architect Bill Allen, whose firm specialises in trouhle-shooting when building defects occur, described the decision to charge for BRE publications as "crazy." It is difficult to disagree with this view considering that the digests will sell at £1 each while the defect action sheets, initiated hy former Housing Minister John Stanley to try to reduce councils' multi-million pound defects bills, will sell at a princely 50p—if they sell at all.

The new order will not please the Research Strategy Committee either. It is already concerned that there is inadequate dissemination of research results, leading to repeated defects. It would like to see BRE devote relatively more resources to dissemination rather than adding more and more results which are not filtering through to the users.

BRE staff are aware of this, and are equally concerned. This is yet an additional factor in their general frustration, on top of more day-to-day grievances: the depletion of numbers has meant not only that the brightest end best bave left to look for more promising careers elsewhere, but also the shortage of juniors—and clericals—has resulted in enomalies like highly-paid specialists heving to mix their own concrete for experiments, not to mention doing the extra paperwork.

Earlier this year, the chairman of the BRE Trade Union side wrote to DoE Minister Sir George Young, complaining that the type of research most essential to politicians was that which "enahles a Minister to provide an answer to a PQ saying 'research on this topic is in hand in my department.'" He pointed out that too often this meant that a piece of work requiring e 12 man-year effort bas only half a man-year put into it.

This squeeze on the research programme is some thing the staff now expect will get worse as direct control from Mareham Street hecomes tighter. More and more urgent work has to be done for the department—BRE has proved enormously responsive and useful on controversial problems like timber frame, UF foam and Airey houses— and it is done at the expense of longer-term projects which scientists are convinced are essential if future problems are to be avolded.

Perbaps most bewildering of all is the regular patting on the bead by Ministers with one hand—while the other hand sets ever-reducing staff targets year after year. The Research Strategy Committee said: "We are convinced that BRE needs a secure future and confidence about its role." At the moment it is extremely short on both counts.

Access rule for the disabled

SOMETIME next spring a new Building Regulation will come into force which will finally ensure that access is provided for disabled people to all new public buildings—and to any extensions and alterations. This will come after years of lobbying, efforts and Private Member Bills which have sought — unsuccessfully — to bring it about.

In theory, a "general duty" to "make proper provision" for the disabled in public buildings has been the law, at least since Dafydd Wigley's Disabled Persons Act of 1981. In spite of almost universal support for the idea, the Act itself contained no enforcement provisions whatever. Inevitably it was largely ignored. But John Stanley, then Housing Minister, did actually want to see the matter dealt with, and it was broadly agreed that the best way tn ensure compliance was to make a new Building Regulation.

The latest draft, which has just gone out to consultation, should please the disabled lobby on several counts. It is now agreed that the duty to provide access should apply to alterations and extensions, and not only to new buildings, as was originally envisaged. There is to be no exemption for small buildings. And wheelchair spaces in sports arenas and anditoria are to be specified as percentages of total capacity, with appropriate cut-off points.

One problem that has emerged was that of how disabled people were to be evacuated from a building in case of fire. It was accepted that this could cause grave danger, not only to the disabled themselves, but also to those who stayed behind to try to save them. For this reason it is proposed that, for the time being, the right of access would be restricted to the ground floor only.

The British Standards Institute is now working on a Code of Practice which should go some way towards solving the means of escape problem in general. Once that has been achieved, it will be possible to apply the new regulation to all floors in buildings.

MIRA BAR-HILLEL

CONTRACTS

£10.7m refurbishment at Debenhams

TROLLOPE & COLLS has been awarded e £10.7m contract to rebuild and refurbish the old Debenham & Freebody building in Wigmore Street, a building Trollope originally constructed in 1907. For London & Leeds Investments, it will provide about 60,000 sq ft of air-conditioned office space, 30,000 sq ft of residential flats, with 6,000 sq ft of shops, together with basement parking for 18 cars. Tha Debenham & Freebody building is listed Grade II and much of the original fabric, including tha external facades, will be retained. Tha main entrance, grand marble staircase, and ground and first floor rooms on the Wigmore Street elevation will be refurbished; the second and third floors above will be upgraded using mouldings taken from the old Gimson plaster ceilings. Above and behind the retained elements, a new steel structure will be constructed and three floors with mansard roofs are being added. The basement level will be lowered to provide plant room space, car parking and conference room facilities. A new central lift core system will serve the office areas and will include four of the store's original hronze and enamelled lifts. The faience facades will be cleaned and restored, curtain walling will he used to clad the new elevations at the rear and tha building will be crowned with a new cupola in GRP, a replica of the original 60 ft faience version. Work, which has just hegun, is scheduled for completion in two years.

The man who fashioned a clothing empire

James Buxton meets the expansionist Luciano Benetton

IN THE 17th century the Minellis, nobles of Venice, escaped the summer mugginess of the lagoon city for Ponzano, a hamlet in the hinterland. There they had a fine villa with high airy rooms and painted ceilings. In the adjoining farm buildings retainers made wine from the grapes growing in the flat green countryside.

Now the Villa Minelli is the destination of another kind of peregrination: of leaders of the world of fashion going to what is now the headquarters of one of the most successful clothing companies in Europe, Benetton. Ponzano is still only a village (near Treviso, 20 miles north of Venice), but the farm buildings are now offices, the company chairman works on the top floor of the summer palace and at the bottom of the garden is a sophisticated knitwear factory.

But despite the grandeur of the setting, life in the villa reflects the informality and clean lines which are the hallmark of Benetton clothes. On the piano nobile, the main floor, girls sort out samples for fashion shows under a vast painting of the Last Supper.

The Benetton family delights in being provincial outsiders who have taken a powerful position in European clothing.

That has only really happened in the past five years. Benetton began in a small way at Ponzano in 1966. By 1978 its jeans, jerseys and T-shirts were on sale at a few hundred shops all over Italy, but exports were almost nil and turnover was a respectable but far from dazzling L66bn (£30m).

Yet this year Benetton expects to sell several times as much in money terms—L480bn worth—through 2,500 shops. More than half its turnover comes from abroad and its name is well known in London, Paris and the big cities of West Germany. Earlier this year Luciano Benetton, the company's 49-year-old chairman and main driving force, was named in a survey as Italy's fifth most successful manager, and in May a Formula One racing car painted in the radiant Benetton green won the Detroit Grand Prix.

Though Benetton is one of the most striking success stories of Italian industry and marketing in the past few years, with an expansion unmatched even in the transient world of fashion, there is nothing ephemeral about it.

EUROPE'S NEW ENTREPRENEURS

Luciano Benetton studied production techniques for knitwear for several years before selling a single jersey and the company innovated from the start, both in production methods and marketing. Every step in Benetton's expansion has been planned long in advance. The company now uses some of the most advanced data processing and factory automation techniques to get the best out of a manufacturing system that still has one foot in the classic Italian network of small artisanal businesses from which it began. But fundamental to its success, of course, is a so far infallible flair for designing attractive clothes.

Even by Italian standards Benetton is a family business to an almost exaggerated degree. It began with the combination of Luciano and his sister Giuliana; she had discovered a natural talent for designing knitwear, and she convinced her brother, then a clothing salesman, that she could design the clothes if he could make and sell them. They began at Ponzano with 60 people and virtually no bank finance and two years later, in 1968, opened their first shop—at Belluno in the Alps. Her two younger brothers, Gilberto and Carlo, joined the company.

Benetton moved from jerseys, cardigans and other knitted clothes into denim jeans in time for the great jeans boom of 1975-76 and then started to make cotton clothes and T-shirts. By 1975 it had about 200 shops in Italy and was opening more at the rate of a hundred or so a year.

But the second take-off came in about 1978 when Benetton first started operating abroad on a large scale and when it filled the remaining gaps in its coverage of the Italian market. "It just so happened that 1977-78 was when the market for informal clothes really exploded," says Luciano Benetton.

The number of Benetton shops in Italy shot up to about 1,500 and there were big expansion drives in Britain, West Germany, France and elsewhere in Europe.

Luciano Benetton: Italy's fifth most successful manager.

"We were never offering crazy *fashions*—just something a little more personal, a little less anonymous than the average, at a time when people were moving towards wearing more casual clothes for everyday use," says Luciano Benetton. The most obvious characteristic of almost all Benetton clothes is their bright colour and their simple shapes. In a Benetton shop it is the colours and display in the window and on the open shelves that strike you most, as they are designed to do.

But the product itself depends heavily for its success on a marketing and production system initially far more sophisticated than that of any of Benetton's competitors. Both are aimed at being responsive to tastes as swiftly as possible.

Benetton clothes are only sold through shops franchised or owned by the company, and they sell only Benetton products. In Italy this means that the traditional clothing shopkeepers have to be ruthlessly cut out. The shops, which conform to an image and style of management decreed by the company, are called by a few different brand names, such as Sisley, Jeans West, Tomato, O12 (for children) and, increasingly, Benetton itself, which all sell much the same clothes and at the same price, though the ambience varies to suit different kinds of customer. Benetton or its agents choose the sites for the shops with great care, often ending up—in Italy—with three or four Benetton shops in the same street.

The shops are the antennae of the whole business. They must be in close contact with head office, daily reporting takings and detailed sales trends to Ponzano. Partly to take account of the fact that Italian shops are now being required by law to install electronic cash registers (most Italian shops up to now have kept their takings in a drawer) Benetton has designed and had made its own specially-tailored model capable of transmitting large quantities of information in real time to the company's European computer network. Meanwhile Comau, the Fiat subsidiary which makes robots and other factory equipment, is completing an automated warehouse near the company's main factories.

From the start the Benettons sought to get round the problem that the clothing manufacturer never knows what colours are going to sell best and usually can't produce extra supplies of the most popular colours from the shops. It can thus get stocks into the shops to respond to a trend within ten days, compared with what it says is a month or more for many of its rivals. It all amounts, as Luciano Benetton says, "to raising fashion from the artisanal to the industrial level."

Only in one respect is this not completely true. Although Benetton has eight factories in Northern Italy its payroll is less than 2,000. But it gives work to another 6,000 people—those who work for the 200 small makers of semi-finished clothes in Northern Italy which supply Benetton's main plants. Benetton handles all dyeing and final ironing—presentation is everything—but well over half the basic weaving and making up is done outside the company's plants.

Benetton thus holds down its overheads, avoids the thankless task of managing a vast workforce and benefits from the much lower production costs of the small subcontractor.

Benetton is visibly becoming more mature and sales are growing a little less fast than before. Turnover doubled between 1979 and 1980 when it reached about L200bn, and last year sales reached L414bn, with estimates for 1983 pointing at about L480bn. Even without the Italian inflation rate of 16-20 per cent since 1980 these are impressive figures and the recession has seemingly made little difference to growth. Gross profit in 1982 was L40bn. But Benetton has virtually ceased to establish new shops in Italy ("the market is saturated," says Luciano) and says it is now "perfecting" its coverage of the rest of the European market, expanding outward from the main cities and growing in the peripheral areas like Scandinavia.

At Ponzano management has become a little more institutionalised. Luciano is evidently the boss, with particular responsibility for marketing but also with a close interest in production methods. He does not at all conform to the popular image of a dark and cunning Italian businessman: he has rather long, brown hair, glasses and an open face. With his enthusiastic grin he looks more like an architect or designer than an entrepreneur.

Although he travels almost incessantly, now in the company's own Cessna jet, and gets bored if he has a holiday of more than a week or two a year, much of Benetton's success may be due to the long periods he spends thinking in the relaxing atmosphere of the villa. He has four children and drives himself in one of those bullet-proof cars Italian businessmen have to have—it came in useful last year when he managed to beat off a gang of would-be kidnappers lying in wait for him when he returned home.

Giuliana, a gracious woman of great warmth, is the brains behind the design, though she has naturally hired outside designers to help. Gilberto, who looks after finance and administration, and Carlo, in charge of production, complete the four person team that makes the major decisions and owns the company, and there is no suggestion of bringing in outside capital or going public. But last year two non-family members took senior positions—Elio Aluffi, who has been with the company for years, became head of commercial planning and Aldo Palmeri joined from the bank of Italy as head of economic planning.

Now, says Luciano Benetton, "The early years of easy growth are over. Our efforts are now concentrated on two markets—the U.S. and Japan. The best prospects are in the U.S., but Japan yields the most prestige and the satisfaction of conquering a strange and difficult market." Benetton already has 30 outlets in Japan—about half of them in department stores.

In the U.S., Benetton is still going fairly slowly—"concentrating on the quality rather than on the quantity of our presence at this stage."

In Britain the Benetton treatment has been applied to Hogg of Hawick, a prestigious but failing Scottish knitwear maker which Benetton bought in 1981. Its plant has been modernised, its designs smartened up and a chain of shops established in Britain, Italy and Germany.

In Italy, Benetton is moving into shoes through its purchase of control of a big shoe manufacturer with a chain of shops.

Champions in the running for the championship

TWO SETS of European management champions come to grips with each other in London today in the final of the 1983 UK National Management Game.

One is a team from Rediffusion Radio Systems which took the 1982 UK title before winning this year's European event. The other is a private entry by three former European title-holders — John Chappell, Paul Webb and Geoff Brown.

They are joined in the four-team UK final by sides from M and G Investment Trust and Watney's at Mortlake, the only other survivors of the 690 teams which entered the national championship when it began last February.

The computer-based contest has been sponsored since 1970 by the Financial Times, ICL and the Institute of Chartered Accountants. The CBI and the Institute of Directors are associate sponsors.

Besides various trophies the winners will collect £2,000. The three runners-up will receive £1,000, £750 and £500 respectively.

A second team from Rediffusion will also be in action against players from National Westminster Bank and GKN in the final of the Management Plate competition for teams knocked out of the championship proper in the first round. The Plate prizes are £750, £500 and £250.

The 1984 UK contest will begin almost immediately with entries closing on November 4. Would-be champions should contact Tony Etchells, the National Management Game administrator at ICL, Beaumont, Old Windsor, Berks SL4 2JP; telephone Windsor 68181. The entry fee is £80 plus £12 VAT.

Michael Dixon

Management abstracts

The married executive. A. Cox in Across the Board (U.S.), January 83

Looks at business attitudes towards marriage, finding that the male executive is expected to be married (and, if he wants a divorce, had better have it young), but that no equivalent expectation exists for the female executive; sees signs that middle managers are now more inclined to take wives' careers into account, but reports that a sizeable — and aggressive — minority would not let that stand in the way of a relocation.

The additional information content of quarterly earnings reports. W. S. Hopwood in Journal of Accounting Research (U.S.), Autumn 82

Reports on an empirical study into the usefulness of quarterly information and finds that such information improves significantly the ability to predict annual earnings.

Towards quality standards for consulting assignments? A. J. M. Werring in De Accountant (Netherlands), January 83 (in Dutch, English version available).

Reports on progress towards the development of quality control for consulting assignments. Suggests which aspects need considering, maintains that each and every assignment has four phases and that their recognition will, ipso facto, improve quality. Arrives at the tricky question of how an evaluation may eventually be made, seeing that clients may accept advice for the wrong reasons.

The corporation as art collector. R. Burger in Across the Board (U.S.), January 83

Examines reasons why companies choose to build up art collections, and quotes examples of acquisition policies; warns of pitfalls — like letting the chief executive's wife make the choice, and discusses how an art adviser can be used.

These abstracts are condensed from the abstracting journals published by Anbar Management Publications. Licensed copies of the original articles may be obtained at £2 each (including VAT and p+p; cash with order) from Anbar, PO Box 23, Wembley HA9 8DJ.

THE ARTS

Architecture

Colin Amery

Enigma of South Kensington

In 1976 His Highness the Aga Khan established an award for Architecture to encourage an understanding and awareness of the strength and diversity of Muslim cultural traditions and to indicate ways in which these traditions could combine with an enlightened use of modern technology to produce good contemporary architecture.

By the end of this year a major London institutional building commissioned by the Aga Khan will be open and functioning in South Kensington—the Ismaili Centre on its island site opposite the Victoria and Albert Museum.

As the scaffolding disappears and the aogular shape of this new centre emerges as a striking part of the London scene many questions are being asked and instant judgments are passed. It seems to me that before the doors are declared open officially is a good moment to try and explain the origins of what appears to be a rather hermetie and enigmatic edifice. Once the origins are understood in the light of the client's elevated attitude to architectural patronage a fair-minded architectural assessment can be made.

There has been an Ismaili Muslim community in Britain for the past half century. It has grown rapidly aa colonial empires have waned and a sudden and large increase in numbers came about because of the expulsions from Uganda under the Amin regima. Tba Ismaili community has several centres in this country but the South Kensington one is the first to be purpose-built.

It is best described as a place of gathering and worship. Behind those granite clad walls (starting at the top) is a roof garden surrounded by council rooms and meeting rooms; on the second floor a large prayer hall for 1,200 peopla; below that a social ball which is approached from the ground level via a series of spacious halls and staircases.

The architects for the centre are the Casson Conder Partnership, the two partners in charge, Neville Conder and Kenneth Price. Much of the interior design is the work of Karl Schlamminger—a German-born Muslim designer.

First it must be said that the Community chose a difficult site. It is an island alongside one of the noisiest and busiest roads in London and surrounded by a rich and important collection of London architecture.

Tha form is simple, the beight determined by the neighbours and tha blankness of the facades made inevitable by tha fact that this is a sealed and air conditioned block — practically no noise penetrates tha interior. The Aga Khan Award makes a great deal of the need for Islamic architecture of today to refer to the Islamic tradition, but the Aga Khan himself bas written; "Surely we do not expect of contemporary architects copies or imitations of the past. . ." and this new centre makes on the outside few concessions to the past or to its neighbours.

It has hints of Moghul chujjas (protecting sloping cornices) in its roofline and the teak windows with their bevelled glass that catch tha sunlight suggest the jaalis of mosques (pierced screens that diffuse sunlight).

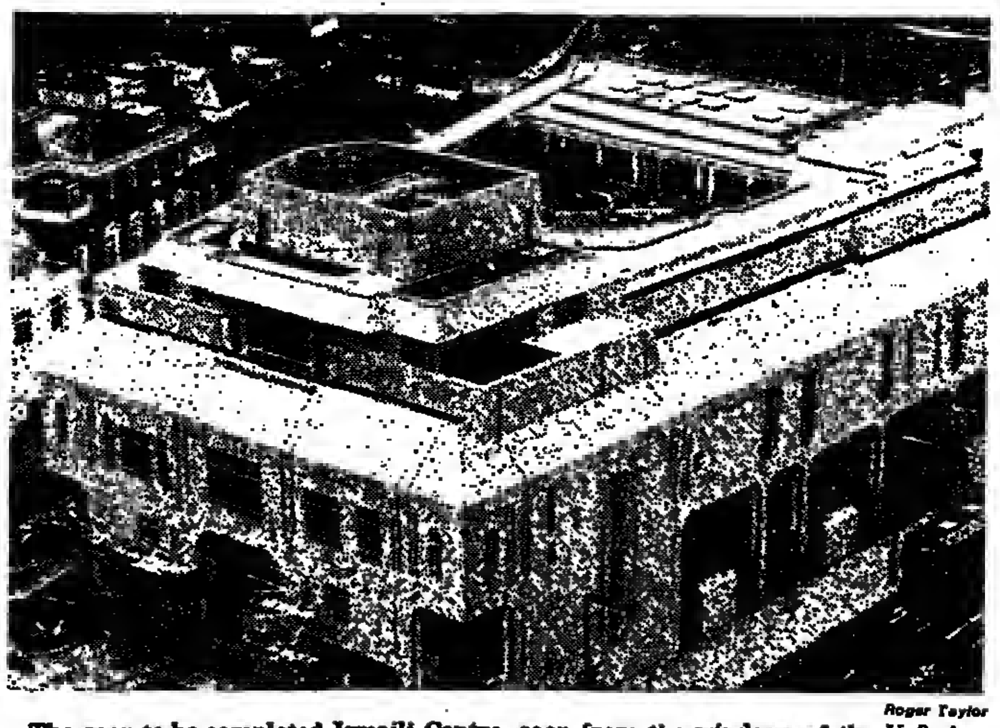
The thin blue line of Brazilian granite is an indicator of the blue tiles within, and a linear hint of the geometric patterns of Islam. In spite of these rather obliqua references to a more glorious tradition the exterior of the centre is not a visual delight. There is a disturbing feeling of top heaviness—of a great load being supported by weak legs. The use of a highly polished granite cladding emphasises the bulk of the form.

Tha interior is more successful than the outside. The entrance hall is cool white marble, a flowing water sculpture in blue granite and a calligraphic inscription instil an immediate sense of other worldliness. Stairs and balls on the way up to the prayer hall are agreeably spacious — colours predominantly white, cream and blue. The prayer hall itself (interior by Karl Schlamminger) tiled walls with random marble slabs and low-level mosque lamps, has a suitably calm quality but it was disturbed for ma by the crossword puzzle chequerboard tila patterns.

The top floor has at the centre the small garden flowing with water well landscaped by Sasaki Associates and the late Lanning Roper. Tha ceiling of the Council Room and the reading room are the most intricate and suggest the boneycombs of Isfahan with some success.

The Ismaili Centre begins the dialogue between Islam and the West—its referenee and symbolism are the outward signs of the debate between the tradition and the preseot. It is an unresolved dialogue—as revealing of the gaps in our understanding of other cultures as it is revealing of the architectural uncertainties of the modern West.

To judge a major new institutional building takes time, this prominent enigma is no exception. Mucb of the debate that accompanies the Aga Khan Architecture Award is about the *search* for new forms: In South Kensington we can see the contemporary architectural dilemma not just writ large, but built.



Roger Taylor

The soon-to-be-completed Ismaili Centre, seen from the windows of the V & A

Elliott Carter/Elizabeth Hall

David Murray

No venerable composer with an important anoivarsary coming up abould fail to produce enougb music suitable for the London Sinfonietta. They are the nonpareil of hirihday calerers, as they proved again on Friday when they anticipated Elliott Carter'a 75th by a few weeks. (He will be home in New York oo the actual hirthday, which he shares with Berlioz—a pleasing coincidence: though Carter is just ooe day junior to Olivier Messiaen, analogies with the old Romantic revolutionary are much easier to conjure up than with the grandiose modern myatic.)

Before the concert, the composer talked informally on stage about his career. Interesting to learn that when he was first drawn to music, *only* the newest music ettracted him (he had Charles Ives as his avuncular guide); and that his "neo-classical" pieces of the 1930s and 40s resulted from a deliberate intention to write accessibla music in an Amarican idiom; and that jazz ia somewhere at the hottom of his music still.

Excellently acranged, the Sinfonietta programme began with the Eight Etudes and a Fantasy of 1950, hright little studies for woodwind quartet that grew out of a Carter class in orchestration. They are beard fairly often now, but I haven't heard many of them—particularly the agile sixth and eigbt Etudes—delivered with the panache of the Sinfonietta team. They made a perfect introduction to Carter'a kind of inventive polyphony.

Oliver Knussen condocted tbe rest of the programme, whicb continued with the song-cycle after Robert Lowell, *In Sleep, In Thunder*, that Carter composed to a recent Sinfonietta commission. (It gets a Barbican performance at luncbtime today, along with Mozart's E-flat Serenade for winds.) As in the 1975 cycle *A Mirror on which to Dwell*, Carter simplifies his polyphony—relatively speaking!—to favour the singer: there are succinct, auggestive harmonies, alwaya marvellously spaced, and speaking *obbligoto* solos for various instrumenta. There was a splendid trombone in "Dies Irae," and e hrash trumpet cartoon of the operatic soprano in "Across the Yard."

These are pithy songs, atrongly felt and sharp-cut. The tenor Martyn Hill was exact and objectively dramatic; though he essayed the occasional passage in American, his very British consonants sometimea made small fractures in a legalo line. Otherwise he bad the right poised energy, as did the soprano Lucia Meeuwsen in *A Mirror on which to Dwell* after tha interval—almost too forceful in the higher register, but full of musical conviction and close sympethy with Elizabeib Bishop's wry lyrics. Here Knussen realised tbe delicate subtleties of the orchestral part still more confidently than the bold strokes of the newer cycle.

He led a most exciting performance of the 1961 Double Concerto for barpsichord and piano, each with its own chamber orchestra. Not only are there alarming rapids to run, with different rbythmic currents hoiling along simultaneously, but knotty problems of balance: the solo instruments—John Constable and Ian Brown were both brilliantly alert and imaginative—of course have unequal voices. Knussen's cogent shaping and keen ear met the challenges triumphantly.

The Ring in London and Cardiff

Last weekend, two national opera companies launched the first parts of their *Ring* cycles. Tha Welsh began, on Friday, at the beginning, with *The Rhinegold;* the English on Saturday started with *The Valkyrie;* privileged opera travellers could thus compose for themselves a handy *Ring* first half. Both works are played in Andrew Porter's translation; both are conducted, produced, and designed by young teams tackling opera's mightiest task for the first time.

Several otber similarities of approach tell us, between them, much that is significant about the ethos of contemporary Wagner performance in both its international and its natlanal aspects. The figure of Reginald Goodall, greatest living Wagner conductor, bulks large in the background: conductor of the last (and first) ENO *Ring*, and intended conductor of this first-ever WNO one (it is boped he will be sufficiently returned to health for the February *Valkyrie)*, Goodall has in the past decade or so instilled into the British Wagnerian consciousness an ideal of the music—of making it broad, spacious, lyrical, and above all an unbroken whola. This ideal obviously influences strongly both London's Mark Elder and Cardiff's Richard Armstrong.

The influence has still to be absorbed, tha atyla made a personal imprint of performance: these were, frankly, two of the most ponderous *Ring* readings of my experience. The Cardiff *Rhinegold* lumbered on feet of lead—well after the opening, when tha "closeup" configuration of the New Theatre could be used to supply a handy excuse for the total absence of bazy E flat enchantment, the score doggedly refused to come to life.

In Mr Elder's account of *The Valkyrie*, at least until a third act thet began to discover at last some buried resources of colour, warmth, and fluency, slow tempos seemed to bave been arrived at for largely didactic purposes, to point up motives (as in the grandiose Act 2 opening) to secure structure. Heaviness was countered in Act 1, by impassioned and lyrical singing; as, in Act 2, passion and lyricism were mueb less in evidence, it reigned almost unchecked.

I begin with the conductors out of necessity, for in both instances I was made sharply aware of just how directly their increased mastery would lead to a less qualified response to the stagings they were conducting. For both—David Pountney's (ENO) and Göran Järvefelt's (WNO)—are modern re-interpretations of the myth in a visual language notably particular and "partial," much (though differently) in the currently fashionable post-Chéreau mode; both demand the impetus of much greater musical confidence if their intentions are to be communicated more clearly.

Even as it stands, the ENO *Valkyrie* (troubled in addition by the last-minute defection of the unwell Linda Esther Gray) bolds the far more substantial promise of eventually pulling together. It evinces a sense of Wagnerian scala (and this is not at all a question of the dimentional differences between the Coliseum and the New stages). Marie Bjornson'a Act 1 set, a 19th century parlour intruded upon by a central staircase and a giant tree, establishes instantly a poetic coberence of imagery that stills prosaic doubts.

The central act, a vast library setting enclosing a mobile "crucible of action" in wbich the fugitive siblings play ont their drama, proved more problematic (and, on Saturday, troublingly creaky and crude in lighting plan)—a collation of stimulating reference points whose corporate purpose remained obscure. At this juncture, and given the general roughness of the stage management, it is permissible to wonder whether Mr Pountney'a whola scheme does not run the risk of domination by its technical wizardry (later on such doubts may well resolve themselves). Once again, a modern *Ring* leaves me hungering for a stronger impingement of Wagner's immense physical world; this is Wagner enclosed and therefore, to some degree, constrained.

Against this complicated, intricate, and fascinating background, a foreground drama of admirable fidelity is enacted. Act 1 is a wonderfully natural and (bar a few excesses) simple narrative unfolding, with Alberto Remedios' Siegmund at his most lyrical, Willard White a Hunding of tremendous menace, and Josephine Barstow an intense, vocally distinctive Sieglinde of remarkable power and freedom (Miss Barstow must now pare away her moments of fussiness).

Anthony Raffell's first London Wotan is, thus far, not much more than a strong, not very eloquent baritene striding about the sage, and Marie Hayward Segal's substitute Brünnhilde offered a brave but faint sketch. Sarah Walker, apart from some clouded tone is high phrases, throws out Fricka'a phrases with splcndid trenchancy; the team of warrior maidens is excellent.

I bave left myself little space to go into tha *Rhinegold* staging. Intentionally, for by and large it seemed to me so limp and dreary—a ragbag of secondhand, ineffective, or just plain silly Wagnerian notions—that to dwell on them would be to rub salt in every wound. Dullness is the order of the day—and, vocally, with the exception of Anne Collins, Anna Williams-King, and Nigel Douglas as a witty, rather dry Loge, the cast is notable for its various kinds of inexpertise. This may seem a brutal dismissal; and when the WNO comes to London in December, that may be tima for a second appraisal.

MAX LOPPERT

Maydays/Barbican

Michael Coveney

David Edgar'a magnificent new play for the Royal Shakespeare Company is an epic, brilliantly plotted piece of writing that takes revolution as its theme and the particular fate of three characters as its subject. For a start, Ron Daniels's production is a silkily organised panorama moving in and out on efficient trucks as the landscape shifts from military barracks in Budapest during the 1956 uprising, to a stunning sit-in on a Californian railway line during the anti-Vietnam demonstrations of 1967, to a series of acidly observed bottle parties and North London kitchen cabinets of the mid-1970s.

Jeremy Crowther is an intelligent academic who wishes he'd been red and in Spain during the 1930s; his pupil, Martin Glass, is a vicar's son who becomes a Trotskyist after sporting a CND badge on his school cadet uniform; and Pavel Lermontov is a Russian officer in Hungary who is thrown into a labour camp for starting a petition in Moscow 12 years later as tha tanks roll into Prague. Arriving in Englan as an expelled dissident, he is adopted by the Establishment as a stick to beat the soft left.

At a smart banquet in his honour, Lermontov throws away the cards of his prepared acceptance speech and condemns those who applaud resistance as long as it is not too near bome. Two things here: an andience will ponder Solzhenitsyn's guru status on the British right and Mrs Thatcher's erstwhile support for Solidarity.

More successfully than any other recent British play, *Maydays* wrestles with the undeniable fact that liberty to say what you like is not quite the same thing as political liberation. It does so in no fatuous or pea-brained manner, but by charting how exactly comrades talk to each other, bow tha splinter groups of tha left sink in a comic quagmire of rival newspaper vending and how Martin Glass travels through the 1970s to become a welly-booted right-wing propagandist ready to expel the Greenham Common women from his patch by the U.S. Air Farce base.

Anyone of my post-War generation will immediately recognise and enjoy the glancing ties of speech, references, above all, perhaps, the easy manipulation of political texts in mundane social intercourse. A row over the purpose of tha Socialist Vanguard movement is punctured by an Islington communard flying in a rage at those who have appropriated her half a grapefruit. Martin, on the eve of his 30th birthday, literally dries up in mid-cliché flow. His best friend, after a classic "situationist" oration is carted off by the police in a flurry of searchlights and revealed as a foolish Angry Brigade bomber.

Lenin is quoted as saying that all revolutions should be festivals, but Lenin also realised that for the people on the ground, at tha time, the consequences could be catastrophic. The play does not glibly celebrate revolution, but points up a few of the myths attendant upon it.

One of these is that a sort of hippy bonhomie will suffice when you confront the major issues of tha world. Nowbere is a sadness at this failing more marked than in a remarkable speech, delivered by Don Fellowes, about the betrayal of an immigrant American generation by the flip stances of their children. Mr Edgar also writes a particularly good scene for Martin and his mother in the vicarage at Christmas time which catches exactly the pain of family fall-outs as children grow up and parents remember an ideal, former cohesiveness.

All along, John Gunter's design is effective on the large-scale but equally fine on detail. Malcolm Storry as a charismatic Socialist Vanguard leader bas the right leather jacket; denims, donkey jackets and woolly hats covered in badges are the English equivalent of hippy headscarves in California. We know exactly where we are with references to the miners' strike, the electricity cuts, Nixon's declaration on the soundtrack of tha Tet offensive.

The central trio are superbly played by Antony Sher as the cunningly rat-like Martin, John Shrapnel as Crowther who leaves the Party after Hungary, and Bob Peck as Lermontov, adjusting his fluent "English" Russian to a faltering "Russian" English tha minute be embraces his Hungarian protegé on a Frankfurt airfield.

Mr Edgar, who adapted Nicholas Nickleby for the RSC, bas returned to top form in bis original play since *Destiny*, which was just as even-banded and objective an account of the English right and racism. The evening is one of high sensual excitement that is guaranteed to set yon talking—if not about your generation, then at least about the broader issues it so triumphantly raises.

Chamber Music season starts

The later works of Beethoven provide the theme for the new season of the London Society of Chamber Music.

The programmes, presented at tha Wigmore Hall, from thla month lo May 1984, feature 16 variations for flnte and piano and some small pieces for piano, some of which were written in friends' visitors' books.

Flautist Susan Milan, Bernard Roberts, the pianist, and tha Delmé Quartet are among the musicians taking part.

Hans Heiling/Wexford Festival

Ronald Crichton

The 31st Wexford Festival opened on Thursday. True to form, the town's friendliness made up for the weather. "Soft Irish rain," said a consoling voice in the darkness, but one felt softness was not enough by itself to bring one dry on foot to the tiny Theatre Royal that for two weeks or so becomes Wexford's resounding bnb.

True to form again, the proceedings opened with an opera respected in theory bnt in practice little known outside its own country. Marschner's *Hans Heiling* is a cornerstone of German musical romanticism. Wagner was chorus master for the first production in 1833. This music marked him, as Weber's had marked Marschner. *Hans Heiling* is a strong piece needing no apology.

Eduard Devrient's plot is more interesting than many concerned with the impact of the supernatural on buman life. Hans Heiling, rule of tha earth spirits, roams the world and falls in love with a simple peasant girl, Anna. In spite of the pleadings of his mother the qneen be goes back to win Anna from her betrothed, the buntsman Konrad. Out of bis element things go wrong for Hans—Anna, tormented by suspicions of evil and visions of weelth, is torn between the two claimants for her heart. The queen mother persuades Hans to return to his realm, but one does not feel that Anna and Konrad will be happy ever after.

Modern producers seem shy of operatic romanticism of the extreme kind and searcb for excuses. At Wexford, Stepben Pimlott offers an evening of pell-mell confusion. This spirit-king is a madman, saved at last from an impossible situation by a strait-jacket. We see tha everyday world througb his deranged eyes, the village revels like a loony memory of White Horse Inn (for some reason the period is npdated to the 'twenties), the men in ghoulisb make-up. Given this approach, David Fielding's weirdly assorted designs may be accounted a success.

The charactera are too mnch diminisbed to be convincing—Hans himself; the over-possessive queen; Anna who should rise to real dignity in her distress; ber worried mother Gertrude. The opera, with the RTE Symphony Orchestra conducted with solld reliability by Albert Rosen, was performed with relentless loudness. When Ingrid Steger as Gertrude quietly aang and bummed the Act 2 *melodrama* whicb is perbaps the most original thing in the score, it came like balm.

Hans was the Russian baritone Sergei Leifcrkus, whose singing remarkably combines plumminess with incisiveness, firmness and unsparing force. His acting is stiff. Constance Cloward, denied much cbance to establish Anna's personality, sang strongly. Much the same applies to Eduardo Alvares as Konrad. As the queen, Malmfrid Salm was imposing but shrill.

German was used. What remained of the spoken dialogua waa well done but some of the sung vowels were unintelligibly distorted. Why put further obstacles before an audience already confronted with a marked discrepancy between the programme synopsis and what is seen on the stage?

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

October 21–27

Music

LONDON

Philharmonia Orchestra, conductor Vladimir Ashkenazy, Maurizio Pollini, piano: Chopin Piano Concerto No 1, Beethoven Symphony No 7. (Mon) (928 3641).

'From Mao to Mozart': the film made of Isaac Stern's visit to China, which delighted the critics, both music and film. Queen Elizabeth Hall (Mon) (928 3641).

Vivaldi Concertante, conductor Joseph Pilbery, Nigel Kennedy, violin, Brigitte Loeser, cello and Paul Oldfield, double bass: Vivaldi, Bach, Haydn, Rossini, Puccini. (Tue) Queen Elizabeth Hall (928 3641).

New Symphony Orchestra, conductor Anthony Hopkins, Anthony Goldstone, piano: Rossini, Rachmaninov, Ravel, Elgar, Borodin. Barbican Hall (Tue) (638 8891).

City of Birmingham Symphony Orchestra, conductor Maxim Shostakovich, John Lill, piano: Prokofiev, Shostakovich. Barbican Hall (Wed) (638 8891).

Royal Philharmonic Orchestra, the Brighton Festival Chorus and Trinity Boys' Choir conducted by Sir Charles Groves as part of the Great British Music Festival series of concerts: Delius, Havergal, Tippett, Patterson. Royal Festival Hall (Wed) (928 3841).

Geraint Jones Orchestra conducted by Geraint Jones in an all-Bach programme. Queen Elizabeth Hall (Wed) (928 3641).

Goldsmiths Choral Union, Musicians of London, conductor Brian Wright: Mozart, Brückner Mass No 2. Barbican Hall (Thur) (638 8891).

Thomas McIntosh piano recital: Mozart, Beethoven, Brahms, Chopin. Queen Elizabeth Hall (Thur) (928 3641).

PARIS

Alain Vanzo, tenor, Martine Masquelin, soprano: Delibes, Gounod, Bellini (Mon 8.30 pm). Barbara Hendricks, soprano, and Orchestre de Chambéry et de La Savoie, Claire Gibault: Mozart, Samuel Barber (Mon 8.30 pm) TMP-Châtelet (233 4444).

Rudolf Serkin, piano recital (Tue) Salle Pleyel (563 8873).

Orchestre Colonne conducted by Karolos Trikolidis, Pierre Amoyal, violin: Bruch, Brückner (Tue) TMP-Châtelet (233 4444).

Ensemble Orchestral de Paris, conducted by Hiroyuki Iwaki, Olivier Charlier, violin, Christiane Eda-Pierre, soprano, Christian Ivaldi, piano: Haydn, Mozart, Strauss (Tue, Thur) Salle Gaveau (563 2030).

NEW YORK

New York Philharmonic (Avery Fisher Hall): Zubin Mehta conducting, James Vandemark, double bass, Harvey Pittel, saxophone. Debussy, Menotti: Double bass Concerto (world premiere) (Tue); Zubin Mehta conducting, Aurora Natola-Ginastera, cello, Kathleen Battle, soprano. Bach, Ginastera, Webern, Mozart (Thur). Lincoln Center (874 2424).

Baltimore Symphony (Carnegie Hall): Sergiu Comissiona conducting, Salvatore Accardo, violin, Women's Chorus. Berlioz, Bruch, Holst (Wed). (247 7459).

Chamber Music at the Y (Kaufmann Hall): Jaime Laredo, director. Schubert, Weber (Tue, Wed). 92nd & Lexington Av. (427 4410).

Merkin Hall (Goodman House): Joseph Kubera, piano recital. All-Cage, programme (Mon); David Holzman, piano recital. Schönberg, Greenbaum, Wolpe, Boucourechliev, Martino (Tue); Pomerium Musices, Colin Tilney, harpsichord. All-Frescobaldi programme celebrating the 400th anniversary of the composer's birth (Wed); Jack Reilly, Lloyd Moss, piano and poetry recital (Thur). 67th W. of Broadway (362 8719).

WASHINGTON

English Chamber Orchestra (Concert Hall): Rossini, Beethoven, Delius, Haydn (Mon). Kennedy Center (254 3776).

National Symphony (Concert Hall): Mstislav Rostropovich conducting, Carter Brey, cello, Oratorio Society of Washington. Rossini, Schumann, Druckman (world premiere) (Tue, Wed, Thur). Kennedy Center (254 3776).

CHICAGO

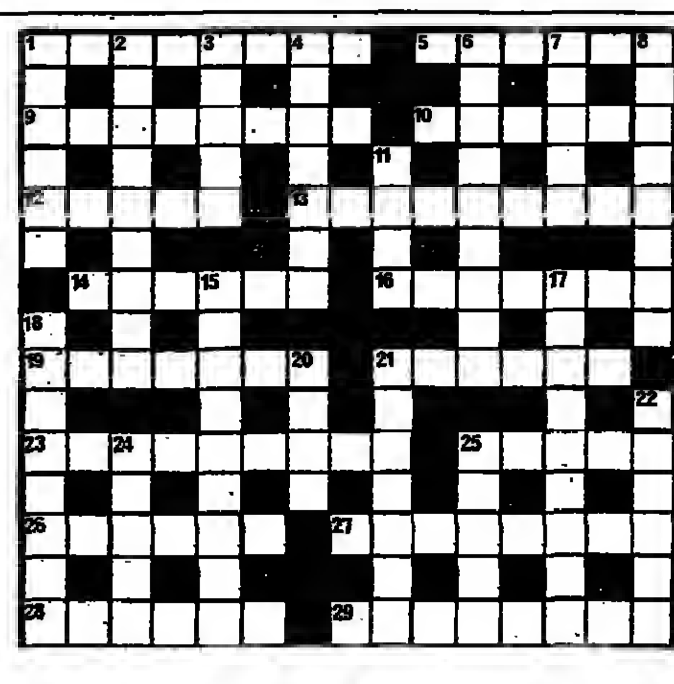
Swedish National Orchestra of Gothenburg (Orchestra Hall): Neeme Jaervi conducting, Birgit Finnilae mezzosoprano. Alfven, Mahler, Sibelius (Tue). (435 8111).

BRUSSELS

Belgian National Orchestra conducted by George Octors with Isabelle Flory, violin: Saint-Saëns, Roussel (Fri, Sun) Palais des Beaux Arts.

Emil and Elena Gilels, piano: Palais des Beaux Arts (Tue).

F.T. CROSSWORD PUZZLE No. 5,250



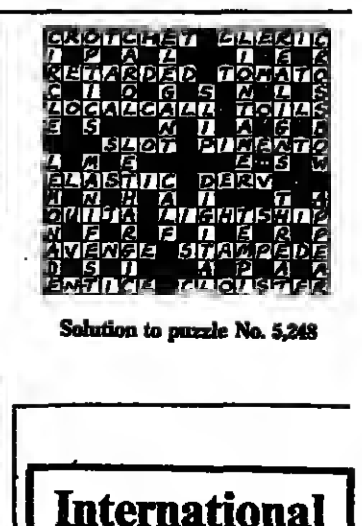
ACROSS

1 Is inquisitive about tha tank and soldiers (8)
5 Enters the office uninvited? (6)
9 Sharp decline in air traffic (4-4)
10 Painler is about pr in disguise (6)
12 Conclude there's no getting away from Hades (5)
13 Exaggerated account discredited (9)
14 Pieces of eight (6)
16 Tidied up? No, down! (7)
19 Tour too complicated to get rid of completely (4, 3)
21 Biblical head-hunter (6)
23 Article with which I'm in full agreement (9)
25 Law-abiding company? (5)
26 Letting the telephone sound after a call for attention (6)
27 Incorrect kit means trouble (5)
28 Doesn't go in for reducing, lika posh people (6)
29 Honestly in distress, but trying to avoid publicity (2, 3, 3)

DOWN

1 Its lead decreases and it often draws (6)
2 Proved to be Latin topics of a sort (4, 5)
3 It counts as a bazard for ramblers (5)
4 People won't be satisfied with this description (7)
6 Hurry to water a plant (9)
7 Name a girl bad been given, perbaps, or had changed (5)
8 Song composed about the present time (8)
11 It's bound to mean a change of plea (4)
15 Rational converse? (9)
17 Man of the same calling (9)
18 They're drunk, but game (8)
20 It meaos no rest to the Italian (4)
21 Staying out in the dark? (7)
22 Eagerly Len rummaged about in the locker (6)
24 Possibly eager to correspond (5)
25 Cast required for play, perhaps (5)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.



Solution to puzzle No. 5,248

FINANCIAL TIMES
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Telephone: 01-248 8000

Monday October 24 1983

Japan's trade dilemma

THE SIX-PART economic package which Japan unveiled last Friday was designed te deal et one go with a number of problems facing the government of Mr Yasuhiro Nakasone. The Y1,200bn tax cut incorporated in the package is Mr Nakasone'e fulfilment of a pledge he made soon after becoming Prime Minister last November. Since it cannot be implemented without legislation, the tax cut may also force the opposition parties to end e boycott of proceedings in the Diet begun 10 days ago after the verdict of guilty on former Prime Minister Tanaka in the Lockheed bribery affair.

The proposed Y1,800bn increase in public works spending should prevent the public sector from exercising a negative impact on economic growth during the remainder of the fiscal year. Other parts of the package, providing for tariff cuts and cheaper import financing, are meant to convince Japan's trade partners that it is concerned about the explosive growth of its trade surplus even if it cannot do much to reverse the trend.

The package may well turn out to be successful in achieving at least some of these specific targets. However it does not follow that the measures taken on Friday will bave much impact on Japan's underlying economic problems. The biggest problem is that, while exports have been growing quite strongly since the spring, demestic demand is weak and the economy as a whole is becoming dangerously dependent en the external sector.

Biggest problem

GNP growth during the current fiscal year (ending next March) may increase by about 0.4 per cent as a result ef the package. But overall growth will still be enly 3.4 per cent. It now looks as if at least half of the growth may turn out to bave come from overseas.

If exports keep the economy moving until the middle of next year domestic demand should eventually start to pick np as well. But there seems very little bepe that, wben this happens, Japan's external surpluses will start to shrink. A more probable pattern for the future now seems to be a continuing year-to-year rise in the trade and current account surpluses with the current account possibly hitting as much as $45bn by 1986 and th trade surplus approaching $60bn.

One reason why Japan seems bound to continue running up bigger surpluses is that important structural changes are taking plece in its econemy. Japanese industry, which was ence heavily dependent on imported raw materials and energy, is tending to use less of both as the emphasis shifts to new sectors with higher added value.

The trend towards a knowledge-intensive, rather than a materials-intensive, industrial structure should have freed resources for Japan to step up its imports of manufactured goods from other industrial countries. Japan's imports of manufactured goods, however, remain very low, partly because of what seems to be a natural lack of propensity to import and partly because of the persistently undervalued yen exchange rate.

Wide gap

The undervaluation of the yen, which will probably cut imports into Japan by as much as $7bn during the current fiscal year, reflects a heavy outflow of long-term capital from Japan which, in turn, is the result of a wide gap between U.S. and Japanese interest rates. Japan could close this gap by sharply increasing its own interest rates bnt only at the cost of aborting the tentative recovery now under way in the economy. As last Friday's 0.5 per cent cut in the Bank of Japan's discount rate indicates, the government is moving in the opposite direction.

The interest rate gap between Japan and the U.S. may eventually be closed by natural forces within Jaoan itself (chiefly the need for the Government to borrow vast sums of money to finance the budget deficits). Until that happens other ways will have to be found of redncing the tensions caused by the growth of the Japanese trade surplus.

The measures which Japan can take now are to step up overseas procurement by the Government, to liberalise restraints on farm imports and to maximise the flow ef Jepanese manufacturing investment to Europe and the U.S. while encouraging foreign companies to expand their stake in Japanese industry. All ef these steps have become urgent if Japan is to head off a crisis in relations with its foreign trade partners.

The large and growing trade surplus, based though it is on structural factors which cannet easily be changed, is a continuing invitation to protectienist actien. Japan bas to demenstrate through its economie and trade policies that it is doing everything in its pewer te strengthen the multilateral trading system.

How to improve numeracy

EFFORTS by British ministers to promote full public awareness of the importance ef the rate of inflation have little chance of success. The same applies to employers' attempts to inform their workforces of the implications of the rate of pay increases. Research has shown that six in every ten people in the UK de not understand what such rates mean. Three in every ten do not even understand simple percentages.

Recruiting practices

Employers have long complained about the lack of numeracy in their recruits. Their usual response has been to blame the education system, and to exhort to change, so that future generations are competent at least in the fundamentals ef mathematics.

Although the recent study of mathematics teaching by the Cockcroft Committee has produced a detailed blneprint for improving numeracy among children of all levels of academic ability, a system as big and complicated as education is difficult to change in the best of circumstances. Moreover the recruiting practices of many employers help to imprison education in its prevailing largely ineffective methods.

In the hope of persuading employers to remove this added blockage the Education Secretary is writing today to the heads of 25,000 companies, as well as to industrial and managerial associations, enclosing a condensed description of the Cockcroft blueprint which sets out bow employers can best help.

The beeklet explains, fer example, the ill-effects ef the increasing insistence that young recruits have a pass grade in maths at GCE erdinary level, or the equivalent. The schools tend to push the great majority of children through an O level syllabus which most of them do not have the mathematics aptitude to cope with. It contains elements such as algebra and complex trigonometry that very few even of the successful scholars will need te use in adult life. Meanwhile, alternative syllabuses tailoring mass teaching to the less academie children are being dropped.

A second educational bugbear is the use by recruiters, particularly in engineering and large retailing companies, of their own or commercially produced maths tests as part of the selection process.

"Both the tests and the way in which they are applied vary considerably in professionalism," the booklet says.

Tests often concentrate on arithmetic ekills "and ignore conceptoal skills such as spatial awareness and an understanding of orders of magnitude approximation," which are of equal if not greater importance. Shortcomings in these conceptual skills are probably less easily rectified in training than are those in computation. A further irony is that, outside engineering and retailing, employers questioned by the committee mostly admitted that young recruits' deficiencies in mental arithmetic and other basic processes soon disappeared under the motivation provided by the job.

Active attention

The underlying problem is that despite the encouraging growth of links between schools and employing organisations, too many ou either side remain ignorant of wbat the other is doing especially where maths is concerned.

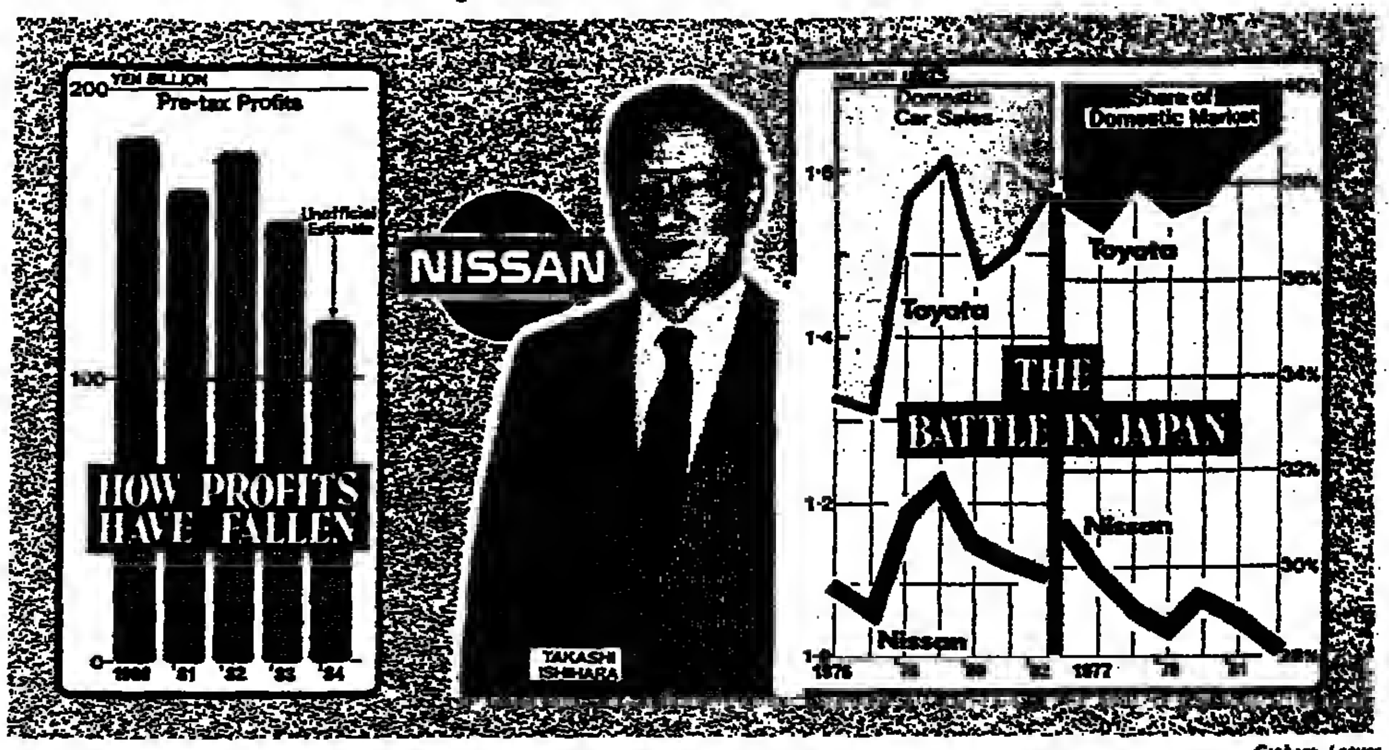
Employers' selection tests have to be made more appropriate, while schools must identify the mathematical needs of various kinds of werk and generate better practical aids to teaching. While closer liaison with the schools would inevitably cost empleyers some money and a lot of commitment, the resulting improvement in numeracy would be well worth the price.

This appeal by the Government to employers at large for belp with a fundamental educational problem is probably unprecedented. It reserves the active attention of managers et the most senier level. Employing organisations which fail te respond can bave ne ground fer future complaints ebont poor numeracy.

JAPAN'S CAR INDUSTRY

Nissan races for the world

By Charles Smith in Tokyo



Graham Leaver

NISSAN Motor Company, the proverbially efficient Japanese car maker, has reached a critical turning point in its fortunes.

The company is halfway through a costly but so far unprofitable drive to turn itself from a purely Japanese manufacturer with a heavy dependence on overseas sales into a multinatienal with plants on all five continents.

Its share of the Japanese market has, however, been slipping for the past twe years, and the effects of pouring money into overseas production ventures are beginning to show up on the balance abeet.

Nissan's proposal to build a major car plant in Britain on which a positive decision is now a foregone conclusion, symbolises both the scale of the companies vision and the lengths to which it will go to realise it.

The UK project will make Nissan the first Japanese car maker with a custom-built car plant of its own in Europe. It would also be by far the largest manufacturing investment to come Britain's way in the past few years. But it could, at the same time, put a serious strain on a company which is already stretching itself in its bid to beat Toyota in the race to become a glebal car-maker.

The key to understanding where Nissan is trying to go is that the company has tended te see itself as the number one manufacturer in an industry where its market share only ranks it as number two—behind Toyota Motor.

The rivalry between the two companies stretches back for decades: Nissan was enthusiastically importing U.S. technology to make cars in the 1930s when Toyota'a car manufacturing operations amounted to little more than experiments conducted by a few engineers in a corner of the company's Loom works.

After the war, Nissan led Toyota by as much as ten years (according te Toyota's own executives) in the race to catch up with the Western car makers. In the 1970s it was Nissan, not Teyota, which first realised the need to invest in a new generation of front-engined front-wheel drive cars te beat the problems posed by the oil shocks.

To complete the picture of Nissan pre-eminence tt is its Chairman, Mr Katsuji Kawamata, who holds the office of Vice Chairman of the Keidanren (Japan'a much more powerful and prestigious equivalent of the Confederation of British Industry). Toyota'a Mr Eiji Toyoda holds only a directorship.

Mr Kawamata'e role at the Keidanren and Nissan's Tokyo base have tended to give the company a bigger say in the motor industry's dealings with the rest of the Japanese economic establishment than Toyota. But all the prestige points have never quite made np for the fact that, while Nissan holds a 28 per cent share of the Japanese domestic car market, Toyota has maintained a share nudging 40 per cent for well over a decade.

In the high growth era of the 1960s and the early 1970s, when Japan's domestic car market was expanding by around 15 per cent a year, Nissan could possibly have evertaken Toyota by simply investing in expanding production for the bome market. But this option no longer exists in the 1980s, with domestic demand for cars almost flat and with many of Japan'e overseas markets putting up barriers against direct exports.

The basis of Nissan's overseas expansion programme, started after the forceful and extrovert Mr Takashi Ishihara took over as President in 1977, is that Nissan should aim to raise its world market share from 7 per cent today to 10 per cent in the early 1990s, primarily by stepping up its ability to build cars outside Japan.

Nissan executives have never put a definite figure on the number of cars the company would need to make overseas in order to reach this target, although it is believed to be between 800,000 and 1m. They have, however, revealed that the company has drastically increased its overseas investment during the past few years as a first step towards acquiring such capacity.

Nissan's overseas capital investments (as opposed to loans, which are considerably larger) expanded from Y11.5bn in 1980 to an estimated Y75bn during the current fiscal year.

The largest single destination for investment has been the newly opened Tennessee pick-up truck plant, which now ranks as the biggest Japanese manufacturing investment in North America.

Nissan says its overseas investment will fall next year even if work starts on the UK project, whose total cost will probably far exceed the official estimate of Y150bn. Spending will be phased over several years and can be fitted into the company's financial plan fairly comfortably, even though the returns are likely to be slow.

According to Mr Masataka Okuma, Nissan's recently-retired executive vice-president in charge of international operations, most of the new everseas projects sheuld start to earn a profit after three te five years—a prediction which the leader of the company's in-bouse union, Mr Ichiro Shieji contests (see below).

Mr Okuma estimatea Nissan will have reached a point where it should be eble to produce around 400,000 cars a year outside Japan by the middle of 1984 (when the Tennessee plant achieves full operating capacity). A plant in Britain could add another 200,000 cars te this figure, leaving the company short by at least 200,000 cars of its 1990 overseas production target of 800,000 to 1m cars. It is possible, though unconfirmed, that part of this shortfall may be filled by the additien of car production line at the Tennessee truck plant.

The fact that Nissan is having to spend a lot of money and run considerable risks in chasing its ideal of a 10 per cent world market share does not necessarily mean—even according to critics ef the company's extrovert top management—that going abroad was a mistake.

Bnt wbat has caused considerable eyebrow-raising elsewhere in the Japanese motor industry, and even within Nissan's own company union, is that in the process the company seems te have lost its grip on the Japanese bome market.

Nissan's overall share of Japanese domestic car sales slipped by 1.2 percentage points between 1980 and 1982, and was still falling in the first half of 1983.

Even more significant than this overall downward trend is the fact that, while Nissan cars have easily held their own at the upper and lower ends of the market, the company's position in the vital middle sector has weakened.

Nissan's share of the medium sized car market (roughly defined as models ranging from 1.5 litres to 2.0 litres in engine capacity) fell by five percentage points between 1981 and 1982, according to the company's newly appointed Executive Managing Director in Charge of Sales, Mr Isamu Kawai. This was partly because of the launching by Toyota of a series of new medium range models but partly also because Nissan's own new car designs failed to win favour with the public.

The loss of market share for Nissan in the middle sector of the car market — which in earlier years was an area of special company strength — is not only bad news for the company itself but also for its 250 Japanese distributors, as this is the most profitable sector.

A programme for domestic recovery was launched early this summer, and has included cuts in wholesale prices as well as a determined attempt to give young workers more say in the styling of new cars.

President Ishihara also shifted 20 members of the 50-member board in a June management reshuffle designed in part to end the engineering divisions' traditional reluctance to accept suggestions from sales. Mr Kawai, the key man now in charge of sales, was transferred from a production division, so engineers will now find themselves being addressed by a fellow engineer on the subject of domestic sales strategies.

The June reshuffle, followed by the launch of some successful new models during the summer and early autumn, is already putting a better complexion on many problems. The company's domestic market share passed 31 per cent in September and seems almost certain to go on recovering during the second half of the current fiscal year. Nissan knows, however, that it still has a long way to go te realise anything like the full results of President Ishihara's development strategy.

INVESTING IN BRITAIN: WHY THE UNION CHIEF SAYS 'NO'

MR ICHIRO SHIOJI, the 56-year eld Harvard Business School graduate who heads the Nissan car workers' union, has been described by company executives as the biggest single reason why Nissan took so long to make np its mind to go ahead with its UK car factory.

Shioji has strongly epposed the plan in its present form and says that, while he has no intention of trying to block it altogether, the venture will certainly fail without the union's blessing.

One reason why Nissan probably could not go ahead in Britain without Shieji's backing is that the union would have to approve tho transfer to the UK of key production staff—from foreman level downwards — to help start up the project. Mr Shioji says that, as of now, he does not plan to give his consent to such transfers.

Shioji's objections to the UK project, at least as presently conceived, are based on what he claims to be concern for the welfare ef the company as a whele, not just en concern for employment in Japan.

He says the project would lose money for at least ten years and would thus represent an unacceptably large drain on resources.

He also claims that Nissan will have its hands tied if it goes te Britain on the terms proposed by the British government. The Nissan factory, he argues, is seen by Mrs Thatcher as a "model" whose main purpose would be to prod BL into greater efficiency. Nissan would never be allowed to make more than 200,000 cars in Britain and would not gain "acceptance" as a full member of the UK industry.

Shiojo believes that if Nissan decided to make passenger cars in the U.S. it would be allowed a much freer hand and weuld even be free to "defeat" Ford or Chrysler. He rejects the claim of Nissan's top executives that a U.S. plant would have a bigger impact on Nissan's Japanese workers than a plant in the UK because its scale would have to be larger. "Anything we do in the U.S. will be over and above what the Americans allow us to export from Japan," he says.

Behind Shioji's objections to the UK project lies a personal rivalry with Nissan's President, Mr Takashi Ishihara, that has deep roots in the company's post-war history.

In the early 1950s Shioji, then a young member of Nissan's personnel department, co-operated with some of the company's senior executives in a successful attempt te break Marxist control of the company's workers by setting up a new anti-communist union.

Shioji became president of the new union in 1962 while his former boss in personnel, Mr Katsuji Kawamata, became president of the company. The close relationship between the two men gave Shioji a unique say in Nissan's management during the 1960s and early 1970s.

In 1973, however, Kawamata moved up to the less powerful post of chairman and in 1977 the forceful and independent-minded Mr Ishihara took over as president.

Ishihara has tried to restore what he sees as management's right to manage during his six years in the presidency, but has paid the price of worsening relations with labour—including occasional stoppages at some of Nissan's Japanese factories.

The UK project, which began as very much Mr Ishihara's personal idea, has become a test of the two men's ability to get their way, with Shioji effectively demanding a revival of the traditional consultation procedures between labour and management as the price of his assent. The fact that Mr Kawamata, a one-time opponent of the UK project, now supports it could make a difference to the outcome of these consultations. But Mr Shioji is still likely to prove a tough nut to crack.

One reason why Shioji wields exceptional clout in his battle with Nissan's management is that he is not merely president of the Nissan motor workers' union. The Jidosha Roren (Federation of Japan Automobile Workers Unions) which Shioji heads includes virtually all the employees of Nissan group companies, including Nissan's 250-odd distributors and many of its suppliers. Shioji can thus claim to be speaking for 230,000 workers, not just for the 60,000 who work at Nissan.

Men & Matters

Banks run

"They are much better than we are," Roger Kubarych, deputy director of research at the New York Federal Reserve Bank'a research department, remarked ruefully about the Fed's rivals from the Bank of England.

At issue, bowever, was not which ef the central banks had the best team of economic gurus for tracking down monetary targets or totting up the value of the gold hoards in the vaults in Threadneedle Street, London, and Liberty Street, New York.

Among the 17,000 athletes and hopefuls who yesterday pounded through the potholed streets ef Brooklyn and Queens in the New York Marathon race were rival teams from the New York Fed and the Old Lady.

Before the race started the rival central banks of Britain and the U.S. had taken a quick look at the times of each others' runners. On the evidence they decided it was better to split the teams and "mix and match" their contestants with all the other runners rather than watch the British team crush the American team on their home ground. "It makes it a little bit more interesting," was the modest comment of Peter Bull, the Bank of England's team manager.

Neither side was in mnch doubt who would win the men's competition. "The British have a guy who is world class," said an awestruck Roger Kubarych. "That is Bill Swanson who did 2 hours 23 minutes in the London Marathon." Peter Bull obligingly confirmed.

The women'e section winner was also a foregone conclusion in the private race between the two banks. For Susan Fancher, a Fed economist, was the only woman among the 17 fast-moving central bankers competing.

As we go to press the race is on.

"I've called to collect the order for the Mayor'e Banquet"

Hamilton's round

For Robert MacAlister it is rather like coming home as be takes over as managing director of Hamilton Brothers Oil and Gas — a company poised to launch itself into the North Sea's next round of development in smaller and marginal fields.

MacAlister, who takes over from the ex-Amoco veteran oilman Ian McCartney, has been absent from the Nertb Sea scene for five years following his rather abrupt departure from his job as bead of Occidental's Londen operatiens.

There was nothing wrong with his performance at that time. Indeed he had supervised the bringing enstream ef the first big British fields after Forties — Paper and Claymore. MacAlister's indiscretien — and even that is a strong term in the circumstances — was te criticise the British Netional Oil Corporation and the Labour Government of the day rather too publicly.

At Hamilton, MacAlister expects the company's future developments in the North Sea te match the Piper and Claymore fields but, as be explains, "on a cumulative scale" of a number of developments rather than equalling the individual sizes of those two big fields.

As for the tax and policy regimes he criticised so openly in the past, be is reserving judgment while he retunes his thoughts te the North Sea.

Tory trials

Among the lesser burdens of state with which British Cabinet ministers have to cepe are those lunches with Conservative women's groups. It is not the compnay about which the ministers complain, it is the food.

According to Tom King, shortly after be was eppointed Employment Secretary, he was faced by a particularly indigestible meal. But his pain was considerably relieved when one of tbe Conservative ladies complained londly: "Madam chsirman, the food today was absolutely disgusting and I intend to bring it up at the annual meeting."

Switched on

Like old soldiers, old television and radie sets rarely die; they slowly fade away. Which is why there is a current annual market in Britain fer at least 5m glass-bottle-type valves (remember them?). They give new life te tired sets which are the pride and joy of their owners, or the rental companies.

Robert Leigh, managing director of Electron House, of Orpington, Kent, an electronics distribution group, reckons the thermionic valve market, although declining year by year, will provide excellent business for his company for several years to come yet. Meanwhile, the growth side of his company (The House of Power, distributing electronics components to industry) is expanding at a lusty 50 per cent a year.

While House of Power develops, the old valves can still provide exciting windfalls. Leigh had some 5,000 U.S. wartime valves on bis shelves of a type long ebsolete. The consignment was forgotten and gathering dust until an Eastern nation aought out this special valve as a keystone of its creaking defence systems—and paid him £2 apiece for the lot.

Electron House features in a new deal arranged by the yeung development finance company Grosvenor Development Capital, ef Slough, Bucks, which is busy investing in high technology £10m of funds pnt up by the old National Enterprise Board, County Bank, British Rail Pension Pension Fund, and Equity Capital for Industry.

Grosvener is backing Electron Heuse by taking a 30 per cent equity stake and providing new working capital—a £500,000 totsl investment. In additien Williams end Glyn'e Bank is putting up £650,000 of new finance in lean and overdraft facilities.

Devid Beattie, managing director of Grosvener, says Electron House fits in with his spread of investments in the electronics industry.

Observer

Foreign Affairs: Arms Control

Think again, Mrs Thatcher

By Ian Davidson

EVER SINCE Nato took its twin-track decision in 1979, and relentlessly since last December, the Soviet Union has been trying to use the Euromissile negotiations in Geneva as o skewer to impale the British and French nuclear deterrent forces.

The primary purpose of this ploy is obvious: if the British and French forces were to be balanced, under treaty restraints, against a certain number of Soviet SS 20 missiles, the U.S. would effectively be banned from deploying any comparable missiles of its own in Europe. Such e deal would be a massive first step in decoupling the U.S. strategic missiles from the protection of Europe.

Washington, London and Paris have repeatedly rejected such a deal, and President Mitterrand and Mrs Thatcher reiterated their rejection, loudly and in unison, at their joint press conference last Friday.

Ashley Ashwood

President Mitterrand and Mrs Margaret Thatcher at their London Press conference last week

The purposes of their public display of unanimity were, no doubt, to show the Russians that neither government is being panicked by Moscow's negotiating ploy; to place once more before their domestic electorates the argument that these last-ditch national deterrents are different in kind and in purpose from the SS 20s, which are only a small part of tho enormous Soviet arsenal; and to demonstrate Nato solidarity as the West German Bundestag braces itself for its Euromissile debate on November 21.

Yet at the same time, there is no doubt that the Russian negotiating ploy, even though it is only a ploy in the Euromissile context, and a pretty transparent one at that, has taken on an autonomous life of its own. For it has focused attention on two facts: first, that Britain and France are not participating in the nuclear arms negotiations between the super-powers in Geneva, and second, that while these super-powers are talking, or pretending to talk, about reductions in their arsenals, Britain and France are planning very large increases in theirs.

As of now, the British and French governments have tended to treat this problem as if it were not serious, or at the very least not pressing. Mrs Thatcher on Friday repeated the standard British line, that the important thing is to concentrate on getting down the enormous number of nuclear weapons held by the super-powers, before turning to the (much smaller) British and French systems; which implies that Britain need not address the issue until the super-powers have reached a reduction agreement.

President Mitterrand said that the French and British positions were almost identical; in fact the French position is even less forthcoming.

At the UN last month he laid down three conditions which would have to be fulfilled before France would agree to join negotiations with the other four nuclear powers. Not merely did he demand an agreement on equal conventional forces in Europe and a ban on anti-missile and anti-satellite weaponry, he even required "a correction of the fundamental difference, quantitative and qualitative, which separates the weapons of the super-powers from those of the other countries."

The trouble with the first condition is that Mutual and Balanced Force Reduction talks (MBFR) have dragged on Vienna for over 10 years without result. The trouble with the second is that President Reagan is enthusiastically exploring the possibilities of hi-tech anti-missile weapons. The third would involve increases or reductions in national arsenals of a magnitude that is not on anyone's agenda.

Yet simply to pose tough preconditions in this way is almost certainly an inadequate response to the Soviet negotiating tactic. President Mitterrand came very close to admitting as much on Friday, when he warned that the Russians would use the British and French systems as an *excuse* for deadlock in the Geneva talks.

It may be, indeed is, wholly inappropriate that the British and French forces should be bargained in the Euromissile talks. But it is not at all satisfactory for Nato that quite large numbers of European citizens, desperately worried by the prospective arrival of bigger and better missiles, should fasten on to tho idea that Britain and France are somehow to blame.

It is not at all clear whether Soviet manipulation of British and French nuclear numbers is just a negotiating ploy, or whether it is also an indication that these systems are a serious object of concern to Moscow. Certainly, in the first SALT negotiations, the Russians tried to get a handle on the British and French systems.

There have also been indications that the Russians are concerned that they are confronted by four nuclear powers, all hostile.

"A valid assumption to proceed from," according to Col Jonathan Alford of the International Institute for Strategic Studies, "is that the Soviet Union is serious to this extent: that the exclusion of British and French nuclear forces from *all* arms control negotiations is now unacceptable."

"The two governments," he says, in an article in the current issue of International Affairs, "must go much further than they have done so far to demonstrate an arms control policy that makes sense to their publics, to the rest of Europe, to the United States and to the Soviet Union. If they do not, they will come to be seen as one of the obstacles to agreement and thus come under great political pressure from all sides."

Col. Alford does not suggest that Britain and France should join the super-powers at the strategic arms negotiations in Geneva. Instead, his recipe is that they should now—quickly—prepare for unilateral public commitments to place limits on their warhead numbers if the super-powers do the same, to reduce these ceilings if the super-powers reduce theirs.

Dr David Owen, leader of the Social Democratic Party, has also argued tho case for British participation in the arms control process. In a speech last week to the Royal United Services Institute, he urged that the UK should negotiate a warhead ceiling for a minimum deterrent, either as part of the Geneva talks or in a bilateral deal with the Soviet Union.

The objections to the Thatcher-Mitterrand position are more serious. It may be true, in theory, that a British-French contribution to tho arms control process would in the end be contingent on an agreement between the super-powers. But the West needs progress in arms control, not as a favour to the Russians, nor even because there is any immediate threat to the stability of the nuclear balance, but in order to calm the controversy over defence posture which has already produced a yawning fissure in the traditional German consensus.

There is nothing to be lost, and a lot to be gained, from volunteering a demonstration of goodwill, now, instead of waiting until it is dragged out of us.

World Computer Markets

How the king is tightening his grip on the throne

By Alan Cane

IBM has now given the clearest possible notice of its intention to continue to dominate—totally—tho world of business data processing.

Last week's announcement began innocuously enough: "Office system enhancements," it read. "New, more powerful personal computers . . ." Yet before the end of tho second line, everybody in the computer industry knew that "Big Blue" had done it again.

What IBM, eighth in the Fortune 500 with a turnover last year of $44bn, had done was to announce two new personal business computers just when everybody was expecting it to unveil its new low-priced home machine. In so doing it has dealt the rest of the computing world a blow from which it will be exceedingly difficult to recover.

That single announcement from tho company's Rye Brook, New York, offices, spelled out the scale of the defeat now facing its principal rivals in the personal computer business, wrong-footed many of those whose job it is to predict the moves of the world's computer giant and made it cleer to the business world that it will be getting its information technology in the future primarily courtesy of IBM.

Over dramatic? Well, consider these comments from industry specialists: "There is no reason to think about anybody else's hardware," says one. "Now there is no excuse o manager can give for not using IBM hardware," says another.

The assault came in two devastating waves

This is why, by now, it must be clear to everyone thot something is up in the professional personal computer (PPC) business. On the one hand, tha PPC—which gives a new kind of desk-based power to the executive—has been hailed as tha busines machine of the future, with more than 150 manufacturers feeding a market growing at over 50 per cent a year.

But on the other, many of those manufacturers seem to be in trouble. Take only three U.S. examples: Osborne, maker of an innovative portable machine, has filed for protection from its creditors under Chapter 11 of tho U.S. bankruptcy laws. Apple Computer, once the glory of the personal computer business, is expected to continue its record this year of sharply decreased earnings. Digital Equipment, formerly the world's most important small computer manufacturer, has seen its share price plummet: "Unexpectedly low shipments of personal computers" is the company's official reason.

Meanwhile IBM will have 30 per cent of the world market for PPCs by the end of this year; its Personal Computer (PC) is thought to account for as much as 5 per cent of its revenues.

Some have likened the situation to the motor industry in the early part of tha century with a few massive groups emerging from a motley collection of small manufacturers. Everybody agrees that the personal computer business is at tha beginning of just such a shake-out; what makes the story different is the dominance that IBM has exerted in data processing for over three decades. The king has decided to re-establish his sovereignty.

And this time, he is leaving few gaps or market niches in which competitors can shelter. The message IBM wants us all to bear is clear and simple: if you need a personal computer on your desk, there is no need now to look further than tho IBM PC, for most business uses.

IBM's assault on the personal computer marketplace came in two devastating waves. The first, the launch of the PC in 1981, took customers, in the words of Mr David Crockett, president of Dataquest, the international consultancy, "from confusion to safety." IBM had said personal computing was *all right!* Business managers heaved sighs of relief and bought the machine in thousands.

But the PC, good as it was, lacked desirable features which other companies said they could provide. The ability, for example, to display more than one document on the screen at any one time — essential for report writing. The ebility to "talk" directly to the company mainframe computer so that company information could be distributed to individual executives for processing on their own machines.

Computer manufacturers like Xerox with the "Star," Apple with its "Lisa" and software houses like Peachtree and Microsoft were making claims to be able to give their customers these facilities, state-of-the-art though they were. This was their rationalo for survival.

In Tuesday's announcement IBM claimed its new machines could display up to seven separate documents and talk happily to IBM mainframes—all for between $5,500 and $9,000. At a stroke, IBM had made the most advanced personal computing techniques merely commonplace—and at a price well below that of the competition.

Mr John Sculley, president of Apple, muses: "We were perhaps naive in thinking we could go head-to-head with IBM in the corporate market. At no cost will it let anyone else get on to that desk top."

Even IBM's choice of name—the 3270 Personal Computer—sends shivers down the spines of the competition. The 3270 series is IBM's most popular computer terminal family; 3270 terminals are sold in their millions to make it possible for businessmen to communicate with IBM mainframes.

IBM is saying tho personal computer is no longer a new, fancy gadget for trendy executives. It is simply an intelligent terminal, an extension of IBM's computing power that reaches right on to the customer's desk.

What can stop IBM's relentless domination of the business desk top? Very little, it seems. Companies like Wang with special credibility in office systems may survive better than general purpose manufacturers.

None the less, all the cards are in IBM's hand. It is already, through massive investment in manufacturing technology, the lowest cost producer of all (with prospects of more to come; Dataquest estimates that the 200 chips needed for today's PC could be reduced to 20 or so using the latest technology).

It is making up for its weakness in software through deals with independent software producers (although the software which distinguishes the new machines is claimed to be IBM's own).

So the technological balance is on IBM's side.

Politically, the story is much less clearcut. Many observers attribute IBM's visible aggression in the marketplace to relief and a sense of freedom following the dropping of the Justice Department's extended anti-trust case against it.

All the cards are in IBM's hand

There is little sign that anything other than elation has been the response within IBM in the U.S. to the success of tha PC. In Europe, traditionally less aggressive and with the EEC still eyeing the company carefully, IBM peoplo are noticeably more nervous of being seen as predatory. One problem facing competitors is a shortage of components—because IBM has secured most of the available stocks.

Yet any monopoly is at risk from people anxious to see it broken up, and IBM is no exception. If its dominance became to be seen as oppressive, it could pay a high price for its success.

However, it must be said for tho company that by *force majeure* it has established standards which have allowed progress in data processing which was unattainable in any other way.

One indication of the way the IBM will dominate business: all the major banks are gearing up to allow corporate customers to talk directly to their computers using terminals in their offices; with few exceptions, the terminal of choice is the IBM PC.

Letters to the Editor

Continuing prejudice against retailing

From the Managing Director of Tesco.

Sir,—What an intriguing insight "An expensive search for tho right formula" (October 18) provides into the continuing prejudice against the distributive trades. While identifying "regional policy's long-standing tendency to exclude the service industries" (allocated only 0.9 per cent of the regional development budget last year), the article later notes that a revision of current policies could include in tha grant schemes "individual classifications now excluded, such as banking, financial services and tourism."

Perhaps the omission of retailing was inadvertent. Perhaps the industry will be included in any future review. If not, if tho historic prejudice against "trade" (that you can get anywhere in it, as long as you get out of it!) is again perpetuated; if the industry is condemned to remain a "no go" sector of decision taking, then it will militate powerfully against the Government's stated ambitions for regional and urban renewal.

For more than six years my company has focused the attention of successive administrations on the contradiction that while Government continues to invoke the retailers' support for their counter-inflation and development policies, they continually deny the industry any financial support whatsoever to further their own goals.

Such a situation cannot continue indefinitely. Indeed, there is mounting evidence that certain sections of the industry are already minimising their development risks by concentrating investment in areas of high, or at least stable disposable income—at the expense of those areas and regions most in need of such investment.

Surely, in view of tho fact that distribution now employs some 2.5m men and women (a fifth of whom are school leavers) and generates more than 10 per cent of GDP, it is timo that Government recognised the prejudice that flaws its own policies in their search for the right regional formula.

I. C. Maclaurin.
Tesco House, PO Box 18,
Delamare Road, Cheshunt,
Herts.

Staff associations

From the General Secretary, Technical Administrative and Supervisory Section, Amalgamated Union of Engineering Workers

Sir,—Your article obout Courtaulds senior staff (October 12) states: "TUC unions see mergers with staff associations as o way of offsetting membership losses in traditional areas caused by recession and unemployment."

This misses the main point. TASS is currently talking to several staff associations, notably in the eerospace sector where our membership is going up, not down. Our enlightened self-interest is to improve the organisation of employees, not to play the numbers gamo. Mergers of this kind bring no financial gain in the short or medium term.

No staff association can ever provide the collective bargaining strength and the expertise that is the bread and butter of a good trade union. As long as employees are divided into "TUC" ond "non-TUC" organisations the balance in negotiations will always be weighted in favour of employers. This applies particularly for senior staff.

As you yourself have pointed out (April 21, etc.) senior staff have fallen behind other employees in salary negotiations. Lack of proper trade union organisation is a prime cause of this decline. Correcting this position is the main motive for trado union unity with staff associations.

Ken Gill,
Onslow Hall,
Little Green,
Richmond, Surrey.

Myth about refining oil

From Mr R. S. Musgrave

Sir,—It is an ever popular myth that raw materials should necessarily be processed in their country of origin, and I am surprised to seo Prof Odell (October 13) advocating that more North Sea oil should necessarily be refined in Britain. There is no particular reason for refining North Sea oil on the west coast of the North Sea (ie in Britain) rather than on its east coast, its south coast or anywhere else.

As for Prof Odell's suggestion that transporting crude oil to distant locations for refining pushes up costs, this implies that the profit motivated oil multi-nationals need advice on how to weigh transport against other costs—hard to believe.

Finally, his suggestion that some sort of artificial incentive to refine in Britain would raise employment and GDP, amounts to advocating en import control/export subsidy. The flaws in this argument are well known to anyono who has studied economics, but evidently not to Prof Odell.

R. S. Musgrave.
Garden Avenue,
Framwellgate Moor, Durham.

Holidays in Russia

From Mrs Peta Colin

Sir, — I read with consternation the article by Mary Anne Sieghart "Some sorry tales of travelling in Russia" (October 15).

I had 15 days in Moscow and Leningrad in June this year. I did go by Intourist, by Aeroflot. *We* were certainly not "herded around." I made many a journey through both towns entirely on my own, by metro and by trolley-bus. The taxi drivers I met were only too happy to take me to my desination. I did get lost several times and policemen and non-official Russians went out of their way to help me. Twice I attended a church service and found it quite beautiful.

Russians visiting Moscow come from all over Russia and are quite free to have a holiday as individuals or in groups, exactly as we do.

A tremendous amount of interest has been shown in our local press about my experience this summer. I am no "commie" but I do believe we should talk to the Russians, and if we go to Russia out of curiosity as I did we should go in much the same spirit as we go to France: with an open mind.

I do criticise Russia for its politics but certainly not for lack of courtesy, and the slowness and quietness of Russia are, for some of us, quite refreshing. The real difficulty in travelling in Russia is lack of a knowledge of Russian. I would suggest this was the cause of Sieghart's difficulties: that and her own prejudice.

Peta Colin.
Rose Walk,
Goring by Sea, West Sussex

Links with Labour Party

From the General Secretary, Engineers' and Managers' Association

Sir,—Philip Bassett's report of our Conference debate on the TUC and its links with the Labour Party (October 17) was quite fair but the headline under which his report was published "TUC urged to weaken Labour links," was not.

The resolution passed by our Conference did not ask tho TUC to weaken its links with the Labour Party. It expressed our members' concern that during the four years of the first Conservative administration from 1979 to 1983 too many of the TUC's policies were directed to what should be done by the "next Labour Government," on the assumption that one would be automatically elected, thus neglecting tho need for the TUC to look after its members' interests in the absence of e Labour Government.

Our Conference was concerned to urge on the TUC a much more positive attitude to its responsibilities during the term of the present Conservative administration.

There is nothing very new in this as far as we are concerned. We put the same view to the TUC Congress back in 1980. As the 1983 Congress made manifest, this view has now gained majority support.

John Lyons.
Station House,
Fox Lane North,
Chertsey, Surrey

Cost of a free lunch

From Mr D. A. Beall.

Sir,—Hardly a day seems to go by without some mention in the financial Press of shares in individual companies being moved by conversations which take place between stockbrokers, certain selected institutional representatives and the chairman or other senior executive of a public company. One that springs to mind in recent days was a 5 per cent jump in the shares of Unigate on a day when the market was down.

The clear impression created by these lunches is that information is being made availabla to e privileged few instead of to the shareholders who own the company. It remains an absolute fact of life that there is no such thing as a free lunch and resultant dealing on inside information merely shifts the cost of those lunch rooms on to somebody else.

D. A. Beall.
The Clock House,
East Ansley,
Tiverton, Devon.

Budget in Italy

From Mr O. Brann

Sir, — When discussing the Budget of the Italian Government in a very prominently placed article (October 1) you attributed it to "The Italian Socialist Government" of Sig Craxi.

This is an astonishingly misleading description considering that we are concerned with a five-party coalition and a Prime Minister whose Socialist Party enjoyed in the last election only the support of approximately 11 per cent of the electorate.

Italy has a system of undiluted proportional representation. For a variety of reasons the Christian Democrats, with some 36 per cent of the votes, have now on two consecutive occasions not supplied the Prime Minister. I only hope that in Sig Spadolini's days you did not, by the same token, refer to a "Republican Party" Government.

O. Brann.
S. Lorenzo,
52048 Monte S Savino (AR)
Italy

FINANCIAL TIMES

Monday October 24 1983

Terry Byland on Wall Street

Rail stocks steaming ahead

STOCKS in the major U.S. railroad companies, which advanced strongly when Wall Street started to search for shares which would be likely to benefit from the second phase of the economic recovery, have retained their poise during the more difficult trading conditions of the past fortnight.

The quarterly reporting season opened last week with results from Union Pacific, Santa Fe Industries and Southern Pacific, and some analysts are already wondering whether recent stock performances have done justice to the growing business on the nation's railroads.

The Dow Jones Transportation average has advanced by 0.8 per cent over the past fortnight, against a similar fall in the Dow Jones 30-stock Industrial average. But the Dow Transportation average takes in the airlines, which have had good reasons of their own for volatility recently, and may not do full justice to the railroads.

Burlington Northern, which links the midwest with the Pacific northwest and the Gulf of Mexico, has attracted most of the attention of investors and analysts of late. The stock has moved up by 6.6 per cent to a new peak over the past fortnight and has beeo the subject of a strong "buy" recommendation by Mr Andras Petery of Morgan Stanley, which was headed, "Burlington Northern – moving like a runaway freight train."

Other rail stocks have behaved less excitingly although CSX and Union Pacific have remained near their peak levels. Both Southern Pacific and Santa Fe have been bedevilled by their disclosure of a much predicted merger agreement, complicated by Santa Fe's hint of interest in buying Conrail.

The stock market accorded a warm reception last week to Union Pacific's announcement of a 43 per cent jump in earnings for the third quarter. Santa Fe's results were less inspiring, but the board was able to point to the upturn in rail traffic, adding that October had made a promising start.

These results bear out the latest statistics from the industry, which suggest that the upturn in rail traffic may be stronger than indicated by the general view in the stock market that railroads are bound to become busier as U.S. industry recovers.

Total rail freight, measured by freightcar loadings as compiled by Mr Robert Long of First Boston Corporation was 16 per cent up in September by comparison with a year ago. But some of the industry sectors make interesting additions to this overall picture.

Coal shipments, which make up about one quarter of the total, have been considerably stronger than expected this summer, partly because the extreme heat pushed up demand at the power stations as Americans turned up their air conditioning, and partly because U.S. coal exports have recovered more quickly than expected.

The upshot is that coal shipments by rail reached 436.1m freightcar loads in September, 4.5 per cent up on the year. The rapidity of the upturn was more clearly disclosed in the August total, which was 20 per cent up over July's figure.

More surprising perhaps is the sharp jump in shipments of grain, which in September totalled 115.7m car loads, a gain of 42.4 per cent on the same month a year ago. Of course, a year ago the U.S. farm industry was already feeling the savage recession which has brought a wave of farming bankruptcies and the Federal Payment in Kind (Pik) programme. But the increase is all the more impressive for that reason.

What may be happening, suggests Mr Petery of Morgan Stanley, is that the sharp rise in corn and soyabean prices between January and September has spurred the farmers to sell off the grain acquired under the Pik scheme. This would explain how a much publicised cut in grain plantings has been accompanied by increased shipments of grain for sale.

Other freight areas showing substantial increases require less explanation. They include motor vehicles, up 40 per cent and metals and similar products, up 20 per cent. Taken together these categories account for 43 per cent of total rail shipmeots.

Against this background, Burlington Northern, whose stock has jumped by a further 7 per cent since the news a week ago of a 55 per cent gain in earnings in the third quarter, seems to have plenty of steam left.

Forty seveo per cent of Burlington's freight is in coal, grain and other farm products and motor cars, and all these sectors show healthy traffic increases.

In addition, Burlington has apparently brought off the extraordinarily favourable purchase of El Paso, the natural gas company, at a price rejected 10 months ago by the El Paso board as too low.

PEACEFUL DEMONSTRATIONS THROUGHOUT WESTERN EUROPE

Anti-missile marches attract 2m

Reports by Ian Rodger in London, James Buchan in Bonn, James Buxton in Rome, Paul Betts in Paris and Paul Cheeseright in Brussels

MORE THAN 2m people marched, sang, listened to speeches and formed human chains in a series of large demonstrations throughout Western Europe at the weekend against the imminent installation of cruise and Pershing nuclear missiles by the Nato powers.

With few exceptions, notably an attempt to blockade a building in Hamburg belonging to the Axel Springer publishing group, the demonstrations were peaceful and orderly. The largest were in Bonn, London and Rome on Saturday and in Brussels and Madrid yesterday.

In London, police had to split demonstrators into three groups rather than two, as planned, for a march to a Hyde Park rally. Police estimated the attendance at about 200,000. Mrs Joan Ruddock, chairman of the Campaign for Nuclear Disarmament, claimed the turnout showed that "the peace movement intends to remain in the centre of British life."

In West Germany, despite the huge demonstrations on Saturday in several cities, there was an undercurrent of uncertainty about the future of the peace movement, which erupted in a poisonous quarrel between Herr Willy Brandt, the chairman of the Social Democrat party, and Frau Petra Kelly, a spokesman for the Greens in Parliament.

Frau Kelly accused Herr Brandt of breaking his word to the peace movement by refraining from unconditional rejection of nuclear weapons. She warned the SPD against trying to take over an independent movement only to betray it later.

The Italian peace movement is likely to be considerably encouraged by the 500,000 turnout for Saturday's rally in Rome. Most of those taking part were members of the Italian Communist Party, whose customarily efficient organisation had hrought in demonstrators from all parts of Italy. But members of Roman Catholic organisations, also nuns and monks, took part.

The Vatican Radio yesterday tried to play down the importance of the demonstrations in Europe warning Catholics against being "manipulated" and implying that the size of the turnout reflected more solidarity with the Communist Party than opposition to the missiles.

The demonstrations in France were marked by a general sense of public apathy. The demonstrators were split, with the Communist Party's Mouvement de la Paix, bringing out perhaps 25,000 on Saturday and the non-Communist Committee for Nuclear Disarmament in Europe attracting another few thousand yesterday.

The Socialist Government opposed the demonstrations. President François Mitterrand remarked in London on Friday that "the peace movement is in Western Europe but the missiles are in Eastern Europe."

Belgian parliamentarians from all parties except the right-wing Liberals – now in Government – were observed in yesterday's crowds. They included former ministers from the Christian Democrats, the majority partner in the present ruling coalition.

The Government is delaying a decision on the deployment of missiles in the country, which is at the heart of the Nato system, until the outcome of the Geneva talks is known, but it has made clear that it wants to stick by its Nato commitments.

Elsewhere in Europe, there were big demonstrations in Vienna, where approximately 50,000 attended a rally on Saturday and 5,000 formed a human chain virtually linking the U.S. and Soviet embassies. (The longest human chain of the weekend stretched over 60 miles from Stuttgart, West Germany to Neu Ulm, the site of the U.S. Army European command centre.)

There were also official anti-nuclear demonstrations in some Eastern European cities. In Prague, three members of the Italian Radical Party were arrested after demonstrating for life, peace and disarmament.

Peace movement rallies also took place in many U.S. and Canadian cities at the weekend.

EEC calls for dialogue with Soviet Union, Page 3

U.S. recognises need to spread burden of international debts

BY STEWART FLEMING IN WASHINGTON

THE REAGAN Administration is trying to head off what it sees as mounting pressure for a so-called "global solution" to the developing world's debt difficulties.

It is determined to stick with its current country-by-country approach. At the same time, it recognises that a third phase of the debt prohlem over the next 10 years will involve a broader strategy than the current approach, which relies heavily oo commercial bank finance.

According to a senior administration official, who asked not to be identified, Argentina and Brazil will in the oext few weeks provide a real test for the current second phase in handling the debt crisis. This has been characterised by the need to get IMF-supervised economic adjustment programmes in place in major debtor countries, and to back them with adequate finance.

The first phase, according to the official, was seen as the scramble to put together financial rescue packages in the wake of Mexico's liquidity crisis last year.

The official also expressed guarded optimism that the coming week would see President Ronald Reagan underlining his commitment to the IMF with moves to hreak down congressional resistance to a bill authorising the U.S. to contribute $8.4bn to the proposed increase in the Fund's resources.

The Administration sees the current political transition in Brazil and Argentina as a healthy long-term development, even if it is making it more difficult to tie up their financial packages with commercial hanks.

In the third phase of the debt problem which, assuming the current difficulties in Brazil and Argentina are resolved, could begin early in 1984, the Administration recognises that new initiatives will be needed to spread the financial burden.

During this period of up to 10 years, it is hoped new medium-term lenders such as life assurance companies will come into the international market, with banks offering longer grace periods on their loans and with the debtor countries seeking to raise new finance through, for example, the public sale of nationalised concerns such as Petrobras, the Brazilian state oil company.

In disclosing some of its views on the longer-term debt outlook, the Reagan Administration appears to be reacting to concern that confidence in the current strategy is waning, especially given that there are doubts outside Washington over forecast growth rates of 3 to 4 per cent in the OECD countries.

If growth falters, the U.S. Administration fears that calls for a global solution to the debt problem – such as suggestions that a new institution be set up to buy developing country debt at a discount – may gather further strength. Such ideas, which could put less emphasis on the differing conditions in individual countries and would no doubt involve heavier commitments from the public purse, run counter to Administration thinking.

Brasilia must support IMF austerity plan, Page 3; capital markets, Page 21

Oil groups haggle on Murchison reserves

By Ray Dafter, Energy Editor, in London

TWO GROUPS of oil companies are engaged in a £350m ($525m) tug-of-war over oil reserves in a field which straddles the UK-Norwegian median line of the North Sea.

The consortia are haggling over the apportionment of oil reserves in the important Murchison Field. Recent studies have shown that the amount of oil lying on the UK side of the boundary line is considerahly less than first estimated. As a result UK companies – and the Exchequer – are likely to see a drop in revenue amounting to tens of millions of pounds a year.

The gross value of reserves at stake in the tussle is thought to be about £350m. And it is possible that UK Government officials will be called in to press for a speedy resolution of the dispute.

Under present operating agreements the two consortia have agreed that the reserves and production should be split io the ratio of 83.75 per cent for the UK consortium and 16.25 per cent for the Norwegian. The field, which lies 120 miles north east of the Shetland Islands, is thought to contain some 350m barrels of recoverable oil. Production, which began in the summer of 1980, is now running at over 100,000 barrels a day.

The Norwegian consortium, led by Statoil – Norway's state oil group – argues that recent productioo experience indicates that 25 per cent of the field lies on the Norwegian side of the median line and that the UK partnership is entitled to no more than 75 per cent of the reserves and production.

It is understood that this assessment is being contested within the UK consortium, led by Conoco. A counter-proposal, based on the very latest drilling evidence, has been put to the Norwegians suggesting that the split should be 80:20.

The re-determination of reserves is expected to be completed within the next fortnight. If it is decided that the division is 75:25 then the UK consortium is likely to insist on a further reappraisal of reserves next spring.

Each time reserves are re-determined licensees have to adjust their share of output, backdating figures to the start of production, as well as recalculating their portion of development and operating costs. It is estimated that the Murchison partners have spent over £800m in exploiting the field.

The Murchison issue is complicated further because Connoco has a stake in each of the UK and Norwegian portions of the field.

World's airlines expect profits after 1985

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT, IN DELHI

THE WORLD airline industry's financial situation is improving slowly, and there is a possibility of breaking through to profits after 1985, following a period of heavy losses.

Mr Knut Hammarskjöld, director-general of the International Air Transport Association (Iata), representing 124 of the world's major airlines, says in his annual report that following the big net loss of $1.8bn on scheduled international services in 1982, the 1983 loss will be $1.2bn.

This will decline further to losses of about $750m in 1984, and $250m in 1985, with the prospect of profits thereafter.

Mr Hammarskjöld, who will be presenting his report to the annual meeting of the Iata in Delhi today, says thet this improvement stems largely from the airlines' own rigorous efforts to cut their costs, although the limited improvement in overall world economic conditions is also contributing.

This is already resulting in a small surplus on operating account, amounting to $500m in 1983 on revenues of $38.35bn.

With continued cost cutting, and a continued improvement in the world economy, the Iata member airlines' revenues no international scheduled operations will rise to $41.85bn next year, yielding an operating profit of about $1.1bn, with a further rise in revenues to $46.15bn likely in 1985, yielding an operating profit of $1.65bn.

But at the same time, the burden of interest rates no borrowings for new aircraft fleets continues to rise. In 1983, the interest payable will amount to $1.7bn, rising to $1.85bn in 1984, and further to $1.9bn in 1985.

As a result, the airline industry will continue to suffer a net loss up to that time, and it is only after that overall net profits will be likely to emerge.

The airlines' need for profits is urgent if the world's aircraft fleet is to be properly replaced during the 1980s, says Mr Hammarskjöld.

Current estimates put fleet replacement costs during the 1980s at $50hn, but this could be doubled to $100bn or more if traffic growth resumes "to even moderate levels."

There were signs by the middle of this year that traffic was improving. "A slow recovery in the world economy and reductions in real average fares should stimulate travel during the second half of 1983," says Mr Hammarskjöld.

"Provided an economic upswing does materialise, we can look to the prospect of breaking through to overall profitability beyond 1985."

Car producers condemn EEC move on prices

Continued from Page 1

lished networks would eventually be destroyed. This would be to the detriment of both the consumers, whose interests the Commission claims to protect, and the manufacturers, who see their hrand image and competitive capacity weakened," they declare.

The manufacturers suggest thet it is not certain that vehicle prices would necessarily fall in those countries where they are above average – the industry could choose to raise them instead. But if prices did come down, "European manufacturers would lose revenue required to implement the investment plans that are needed to counter Japanese and Eastern European competition."

Privately, the Europeans maintain – though this is not in their formal reply – that BL in Britain is among the most vulnerable companies if price controls are imposed and prices fall.

Certainly Austin Rover, BL's volume car business, would have to change its strategy for building up continental European sales. In markets such as West Germany, where it has hardly any network and a poor image, it is attracting customers to the dealerships with very low prices – well below those for the same models in Britain.

World Weather

		°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	C	16	61	Dubrovnik	S	15	59	Malaga	F	24	75	Salzburg	S	11	52
Algarve	S	25	77	Faro	S	22	77	Malta	F	22	72	Seoul	F	12	54
Algiers	S	24	75	Florence	S	13	55	Manila	S	33	91	Singapore	R	30	86
Amsterdam	S	9	48	Frankfurt	F	12	54	Miami	C	29	84	Stockholm	C	10	50
Athens	F	18	64	Funchal	—	—	—	Milan	S	12	54	Strasbourg	S	8	46
Bahrain	S	30	86	Geneva	C	9	48	Moscow	C	8	46	Sydney	—	—	—
Bangkok	R	32	90	Gibraltar	C	21	70	Munich	S	10	50	Taipei	D	28	82
Barcelona	S	18	64	Guernsey	S	12	54	Nairobi	F	26	79	Tangier	S	23	73
Beirut	C	23	73	Helsinki	F	8	46	Naples	C	12	54	Tehran	—	—	—
Belgrade	F	10	50	H. Kong	C	28	82	New Delhi	S	32	90	Tel Aviv	C	24	75
Berlin	S	10	50	Innsbruck	S	10	50	New York	F	10	50	Tenerife	S	26	79
Biarritz	S	20	68	Inverness	F	8	46	Nice	S	20	68	Tokyo	C	18	64
Blackpool	C	10	50	Istanbul	F	11	52	Oporto	F	17	63	Toronto	C	10	50
Bordeaux	S	17	63	Jersey	S	11	52	Oslo	F	10	50	Tunis	S	23	73
Brussels	S	10	50	Jo'burg	C	29	84	Paris	S	13	55	Valencia	C	17	63
Budapest	S	11	52	Las Palmas	S	27	81	Prague	S	9	48	Venice	S	13	55
B. Aires	S	18	64	Lima	S	22	72	Reykjavik	Sn	-3	27	Vienna	S	10	50
Cairo	C	29	84	Lisbon	C	24	75	Rio de J'o	C	33	91	Warsaw	C	10	50
Cape Town	C	18	64	Locarno	F	13	55	Rome	C	15	59	Zurich	S	7	45
Caracas	S	28	82	London	S	15	59								
Casablanca	S	23	73	Los Angeles	S	32	90								
Copenhagen	C	10	50	Luxembourg	S	10	50								
Corfu	S	15	59	Madrid	F	20	68								
Dublin	F	12	54	Majorca	S	20	68								

Readings at mid-day yesterday:

C–Cloudy D–Drizzle F–Fair Fg–Fog H–Hail R–Rain S–Sun Sl–Sleet Sn–Snow T–Thunder

Tel Aviv SE reopens

Continued from Page 1

to purchase bank shares held by the public at the end of five years at the rate of 104 per cent of their dollar value on October 6, the last day of trading. Alternatively, the shares can be converted into high yielding long-term savings schemes.

The banks have agreed to stop supporting their own shares by buying up surpluses through subsidiaries. Instead, the Government has undertaken to step in to mop up excess selling orders if they seem likely to drive the share prices down steeply.

It is not yet known at what point the Government will intervene, or how much it is prepared to commit to this operation. But the general assumption is that, if prices drop by more than 15 per cent, government support will be activated.

Meanwhile, following persistent rumours about insider trading of bank shares before the crisis, the head of the Securities Authority has been asked by the governor of the central bank to ascertain the precise extent of the sale of bank shares by senior bank officials since last April.

The Attorney General has also been asked by the central bank governor to give his opinion on the sale of shares by senior bank officials.

THE LEX COLUMN

Short measure for the recovery

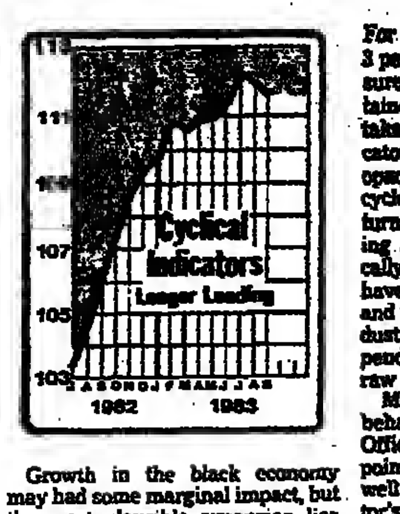
For the UK stock market October, not April, is usually the cruellest month. But this year the slide in equities has been at least partly sparked off by confusion over what is happening in the real economy. Half the market seems to be depressed over the frailty of the recovery; the other half is already gazing anxiously at the horizon for signs of a downturn. The uncertainty is deepened by the statistical jungle.

The measures of production have shown only the most modest of improvements from the low point in 1981, and the noises from the Confederation of British Industry have ranged from the cautiously optimistic to the cautious. There is little sign of restocking, exports are being squeezed and capital investment, particularly by manufacturers, is still sluggish.

In sharp contrast, the expenditure measures of the economy are running away, with record sales volume in the shops. The housing market has had an exciting canter – at least until the last couple of months – and car sales have never been so buoyant.

For the financial markets the discrepancies between the two sets of indicators raises a series of puzzles. How is it that this apparent strong growth in demand can have such a modest impact on production – even assuming some leakage in the trade account? How sustainable is the growth in consumer spending? Will it be related to new inflationary pressures? Certainly, if investors agreed with the Chancellor of the Exchequer in his Mansion House speech last week that the trend in inflation is now decisively downwards, short-dated gilt-edged would hardly be standing on a yield base of 10½ per cent.

It is becoming evident that the official statistics are doing a poorer joh than in the past in tracing what has been happening in the real economy. The sharp adjustments to the series when they were rebased from 1975 to 1980 established that the distortions had become worryingly large. More to the point, eveo after the rebasing, it is likely that they have not caught up with the structural changes in the economy that have taken place in the last three decades. The discrepancy between what the statisticians measure on the output basis and on the expenditure basis is growing rapidly. On an expenditure basis, for example, gross domestic product in the first half of 1983 was 1.7 per cent higher than the average for the peak year of 1979. On an output basis a decline is recorded – of no less than 2½ per cent.



Growth in the black economy may had some marginal impact, but the most plausible expansion lies elsewhere. The output data is collected from long-established companies – many of them in the traditional business areas which are now in decline. The statisticians have found it extremely difficult to sample the newer companies – those flocking onto the Unlisted Securities Market for example – in the growth sectors of the electronic and service industries. The CBI, too, will be slow to pick up input from these sources. So the likelihood is that the true production trend io the UK is rather better than the output figures suggest and more in line with the expenditure measure.

Spending

The strength of consumer demand may therefore be a less isolated feature than it appears at first. Certainly the wide consensus among stockbroking analysts that spending would tail off after the second quarter of 1983 looks less blindingly obvious after the strong rise in retail sales recorded in September. Their argument rested heavily on the rundown in the savings ratio to a low of 8 per cent in the second quarter. Yet personal debt as a proportion of gross financial wealth is well within past parameters, and this may be a more important consideration for individuals in making spending decisions. Anyway, the savings ratio was probably rebuilt to a small extent in the third quarter, in spite of the further ½ per cent increase in spending, and a frisky run-up to Christmas looks on the cards.

With disposable incomes likely to move ahead gently next year, spending should go on rising, although it would be unrealistic to expect consumers to remain the dominant motor for economic growth.

For this year's GDP growth of, say, 3 per cent – depending on the measure of one's fancy – to be sustained, the company sector must take up the running. Here the indicators have been particularly opaque, mainly because the stock cycle has obstinately refused to turn. But the pattern of stock holding may have changed quite radically in recent years. Big companies have learned to live with low stocks, and the companies in the newer industries tend anyway to be less dependent on traditional industrial raw materials.

More encouraging has been the behaviour of the Central Statistical Office's cyclical indicators – now pointing to a sustained upswing well into 1984. The corporate sector's capital expenditure plans are, according to various surveys, pointing upward again. Companies, which are enjoying rising profits and a liberal stock market response to cash calls, are certainly well able to fund such a pick up. And with unit wage costs now rising at about 1¼ per cent a year, the incentive must be there. Finally, exports, disappointing up to now, may start to look healthier as the economic recoveries in Europe take a stronger hold.

If corporate-sector spending does indeed pick up – and the course of the wage round is likely to prove a critical factor on this front – GDP in 1984 should grow quite strongly, although there may be some tailing off by the end of the year. From then on, if the Government sticks as expected to its fiscally neutral guns, the underlying sustainable rate of growth of the UK economy will be the determining factor. In the 1970s that rate of growth might well have been negative. However, with the electronics revolution, new products and services are now emerging rapidly. The growth in the consumption of these new products means that underlying GDP growth has probably become positive.

According to stockbrokers de Zoete and Bevan, the rate of sustainable growth that might emerge – somewhere round the beginning of 1985 – may be in the 1 to 1½ per cent area. That figure should move up as the new industries spread their wings, but recovery relying on supply side improvements is likely to be a very lengthy process, and the underlying growth rate may not move up towards the 2½ to 3 per cent range much before the end of the decade. How stock markets would react to such a departure from the stop/go traditions of the postwar period is anyone's guess.

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SECTION II – COMPANIES AND MARKETS
FINANCIAL TIMES
Monday October 24 1983

CSFB terms for Texaco leave market gasping

BY MARY ANN SIEGHART IN LONDON

ALL FRIDAY morning, Eurodollar new issue managers from the big six houses huddled in high-level meetings. They were competing for the same mandate, and the prize was the lead management of a $200m bond for Texaco, the U.S. oil company.

The bids had to be in by 1pm. They cancelled their lunches and sat by the telephone. It was not until 2.30 that Texaco finally decided to go for the most aggressive bid.

Crédit Suisse First Boston won the deal in circumstances reminiscent of Texaco's January issue. It had gone for terms several points cheaper than many of the other bidders: a 10½ per cent coupon at e price of 98, giving a yield over the bond's seven-year life of 10.92 per ceot.

The market was left gasping. One new issue manager said, "We thought we were committing suicide with our bid but this is even worse."

The bond started trading at a befty two-point discount, just like the last three CSFB-led deals for Montreal Urban Community, Nordic Investment Bank and PKbanken. At that level, it was still yielding 10 or 20 basis points less than the equivalent U.S. Treasury bond.

A few people were suggesting oo Friday that, although it was undoubtedly expensive, it might just work. Texaco is a popular name with Germao and Swiss investors and was the only oon-bank issuer last week. But CSFB was obviously gambling oo a good market this week to bail the bond out, and Friday's news of a $2.4bn rise in the U.S. M1 measure of money supply, after the market was expecting a $1.2bn fall, has put paid to any chances of that.

The deal also carried warrants to buy a 10½ per ceot, ten-year bond at a price of 99 within the next four years. The warrants were offered at $20 by CSFB and the price changed little over the afternoon.

This is the fourth issue with bond warrants in the space of ten days, but unlike the spate of bond warrants last year, this is not necessarily an indication that investors are bullish about interest rates. Then the warrants had lives of six months or a year, so were only worth buying if people thought rates would fall in that period.

The most recent lot have lives of four to five years. As one new issue manager explained: "It gives you a sbot at the whole interest rate cycle."

From the borrower's point of view, the warrants are very good news. The mooey he makes from selling them just about covers the bonds issuing expenses, making the all-in cost no greater than the coupon level. Most of the warrant issuers have been involved in interest rate swaps, and this is evidently a way of reducing the cost of floating rate funds still further.

Does investor interest justify this sudden craze for bond warrants? Though they are oot this time an interest rate punt, they may be useful for investors who want to keep a toe in the water of the dollar market without putting too much of the currency up front.

The same motive must have fired European Banking Corporation, which came out on Friday with the first partly-paid dollar bond since the end of January. The $50m issue has e 7½-year life and pays e 12 per cent coupon at par. Twenty per cent of the price is payable now and the balance next May. Société Générale is leading the deal with EBC.

The dollar secondary market was firm last week, with prices rising by over ½ point, but there was not the follow-through to the previous Friday's good U.S. money supply figures that some people had expected. This week will see the U.S. Treasury's refunding announcement, which, together with Friday's bad money supply figures, might give the market the jitters.

INTERNATIONAL CREDITS

Brazil battles for the smaller banks

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

IT MAY be a good omen for Brazil that the first commitment to its new $6.5bn loan that arrived in New York last Tuesday was for a small amount of money from a minor Scandinavian bank.

At least that is what the leading creditor hanks are hoping. For as the process of syndicatioo gathers pace from now on it is the smaller banks that will matter most in sealing the fate of the loan. Banks must reply to Brazil's request by November 10 and only if the "critical mass" of positive responses has been achieved will the International Monetary Fund approve the country's austerity programme. Estimates of the necessary size of this critical mass vary, even among bankers on the advisory committee for Brazil, from 65 per cent to 90 per cent of the total amount sought.

None of the banks spearheading Brazil's latest debt rescue effort are under any illusion that the task of bringing all 830 creditor banks into the loan will be an easy one. At the end of last week they were, however, more hopeful of success following a "positive" response to a series of meetings with creditors worldwide.

At the meetings Sr Affonso Pastore, Brazil's central bank governor, and other officials tried to impress on smaller banks the need for the loan to go ahead. Small banks with a relatively low exposure are better placed to walk away from Brazil's problems than large banks which could not afford the losses from e Brazilian default.

They have two main motives for wanting to opt out of fresh lending to Brazil. The first is their fear that the loan is simply throwing good money after bad. The second is rather more subtle, but still very powerful. Executives of smaller banks complain that the regime of forced lending to Latin America has taken away their right to manage their own affairs.

There is no benefit in terms of customer relationships or ancillary business in going along with a loan whose terms have beeo foisted on them by the IMF and their larger brethren, small banks argue.

This is why even IMF officials admit privately that the regime of lending under duress cannot last forever. With its $6.5bn loan request, Brazil has become the first Latin American country to come back for a second helping of money from the banks. Its loan is a critical test of wbether the arm-twisting by central banks and the IMF, which was applied successfully in the first half of this year, still works today.

Yet, surprisingly, there was little sign of alarm among the really large creditors last Wednesday wheo Brazil's Congress rejected the proposed law limiting wage increases to 80 per cent of inflation. The law was supposed to be a central plank of the economic programme agreed with the IMF. Its rejection could give faint-hearted smaller banks the excuse they need to opt out of the loan.

However, an immense amount of effort is now going into the syndication process and smaller banks will not be let off the book so easily. Senior bankers were quick to point out that commitments to the loan are conditional on the IMF approving a replacement decree last week, by Brazil's Presideot João Figueiredo, making the wage policy more flexible and imposing additional taxes.

The IMF is now studying the new decree, a process which may take some time, but bankers hope that it will be pleased with the increased taxes announced last Wednesday night. It has been trying to persuade Brazil to raise extra taxes for some time. Moreover, the immediate imposition of replacement measures demonstrates forcibly the political will of the Brazilian Government to stick with its austerity programme.

The market's perception of this determination has been reinforced by Dr Pastore at his meetings with bankers in Toronto, Honolulu, Tokyo, London and Zurich. For ten days, at those meetings, Sr Pastore became a sort of Billy Graham of debt.

Not that many bankers would actually admit to have been "born again" at the meetings, hut most have been left painfully aware of the bell that awaits them if they refuse to beed the call.

This notion that the financial community cannot afford for the credit to fail remains one of the strongest arguments in its favour, and it explains the mood of subdued resignation that pervades the banking world about extending fresh loans to Brazil.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
IBJ ‡	100	1991	8	11⅞	99¼	IBJ Intl., Bankers Tst. Intl., Morgan Stanley	11.925
Royal Bk. of Scot. ¶‡	75	1993	10	11¾	99¾	Samuel Montagu	11.819
PKbanken ¶‡	75	1990	7	12	100	CSFB, First Interstate, PK Christiania Bank	12.000
DBS §	70	1998	15	5½	100	Daiwa Secs, DBS-Daiwa, Dresdner Bank	*
Nippon Credit Bank ‡	100	1990	7	11⅞	100	Morgan Stanley, Sal. Bros., Nippon Credit Intl.	11.875
EBC (p) ‡	50	1991	7½	12	100	Societe Generale, EBC	12.000
Texaco ¶‡	200	1990	7	10½	98	CSFB	10.923
D-MARKS							
Finland ‡	150	1990	7.	8	100	Dresdner Bank	8.000
Council of Europe ‡	150	1993	8	8¼	100	BHF-Bank	8.250
SWISS FRANCS							
Daishinpan Co. **§‡	30	1989	–	3	100	SBC	3.000
World Bank ‡	100	1995	–	6	99½	SBC	6.060
Baxter Travenol $‡	125	1993	–	7	–	SBC	7.000
Sears Roebuck $‡	125	1993	–	7	–	UBS	7.000
Amax Ovs. Fin. $	100	1991	–	7¼	–	Sofibic	*
Prov. of Quebec ‡	100	1993	–	5⅝	100	CS	5.625
Tachno Chemical **‡	20	1988	–	6	99¾	UBS	6.059
Niigata Engineering **‡	50	1988	–	6	100	UBS	6.000
Occidental Ovs. **‡	50	1988	–	5⅞	100	SBC	5.875
S&B Shokuhin **‡	20	1988	–	6	100	SBC	6.000
Toyo Suisan Kaisha **§	25	1989	–	3¼	100	CS	*
Hoshiden Electronics **§	50	1988	–	3⅛	100	UBS	*
Ireland	80	1993	–	*	*	Paribas (Suisse)	6.500
Girozentrale der Öst. Sparkassen **‡	50	1987	–	5⅜	100	CS	5.375
Japan Highway	100	1991	–	*	*	SBC	5.625
STERLING							
Australia ‡	100	2015	32	11¾	95.736	SG Warburg	11.899
Bk. of Tokyo †‡	30	1990	7	⅛	100	SG Warburg, Bk. of Tokyo Intl., County Bk.	–
AUSTRALIAN DOLLARS							
News Corpn. Secs.(a) ‡	30	1988	5	14	100	Hambros Bank	14.000
GUILDERS							
Oce-Van der Grinten §	100	1998	15	6½	*	Amro Bk., Pierson, ABN	*
EIB	250	1993	8	8½	*	Amro Bk., ABN	*
LUX. FRANCS							
Eurofima ‡	600	1991	8	10	100	Kredietbank Lux.	10.000
Landesbk. Rheinland-Pfalz **‡	250	1988	5	10½	100¼	Bque. Intl. a Lux.	10.433
ECUs							
EIB ‡	50	1993	8.44	11⅛	100	Soc. Gen. de Bque.	11.125
Italy ‡	60	1990	7	11½	100	Soc. Gen. de Bque., Kredietbank, Paribas, San Paolo, Banca Comm. Italiana, Daiwa Secs., Nikko Secs.	11.500
YEN							
IADB	15bn	1993	9	7⅞	99½	Nomura Secs.	*
TVO Power **‡	5bn	1993	9	8½	100	Yamaichi Secs.	8.681
BFCE ‡	20bn	1993	0	7.8	99.10	Daiwa Secs.	8.089

* Not yet priced. ‡ Final terms. ** Placement. § Convertible. † Floating rate note: coupon is spread over 3-month domestic Libor. ¶ With warrants. (a) Increased. (p) Partly paid. $ Dual currency issue repayable in dollars. Note: Yields are calculated on AIBD basis.

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

U.S. BONDS

Surprise rise in M1 prompts swing back to black pessimism

U.S. BOND prices fell sharply late on Friday following the news of a surprise $2.4bn jump in M1. The behaviour contrasted with the performance a week earlier when prices had surged on the back of an unexpected drop in M1. But while such movements captivate the market's attention, they only serve to disguise the fact that U.S. interest rates are still on a plateau.

For most of last week short-term U.S. interest rates drifted lower and long-term bond prices firmed. At the weekly U.S. Treasury bill auction on Monday there was good demand for the paper on offer and the average rate for the 13-week bills fell 20 basis points to 8.63 per cent and the rate for 26-week bills fell by 18 basis points to 8.79 per cent. The two-year note auction in mid-week, when the Treasury sold $8bn, was also well received with the average yield falling some 40 basis points to 10.51 per cent.

By last Thursday evening the Treasury long bond was back up to the levels of the previous Friday and was trading at 104¼ while 10-year notes were also back up to 102⅞. However, the release of the M1 figures knocked more than a point and a half off the long-bond which ended the week at 103⅛. Meanwhile the three-month Treasury bill yield of 8.71 per cent at the end of the week was virtually unchanged from the levels of three weeks ago.

The market's reaction to the weekly money supply figures reflects its growing frustration. Even after last Friday's figures, M1 is still very comfortably situated in the middle of the Fed's target range and one week's figures should not unnerve the market but the market mood switches alternately from wild optimism to black pessimism as the chances of a further easing in Fed monetary policy are weighed up.

Last week was fairly typical in this respect. Mr Volcker's mid-week remarks about the prospects for inflation staying at the lower end of the 4½ per cent to 5 per cent range heartened the market, as did the release of the September housing starts figures which showed a surprisingly large 13 per cent drop from the August level. A sign, perhaps, that the economic recovery is faltering?

On the other hand the third quarter gross national product data—GNP grew at a vigorous 7.9 per cent—reinforced the market's fears that the economy is continuing to grow at too brisk a pace and this does not leave the U.S. authorities much room for manoeuvre in easing monetary conditions further.

In the short term the credit markets will be focusing on this week's quarterly mini-refunding operations and a further bout of economic statistics. Wednesday's announcement of the refunding plans is not expected to contain any real surprises. Dealers believe it will be a traditional three-pronged package to raise around $15bn, with probably $4.25bn of 30-year bonds, $5.5bn of 10-year notes and $6.5bn of 3½-year notes.

The market's reception of the refunding package will be important for short-term buoyancy but the economic data will probably have an equally important impact on the tone of bond prices this week. The market will be looking for reassurance in Tuesday's inflation figures with the expectations that the rise in the consumer price index in September will be much the same as in the past couple of months.

William Hall

U.S. INTEREST RATES (%)

	Week to Oct 21	Week to Oct 14
Fed funds wkly aver	9.36	9.46
Three-month CDs	9.12	9.25
Three-month T-bills	8.49	8.79
30-year Treas bond	11.48	11.71
AAA Utility	12.38	12.50
AA Industrial	12.38	12.51

Source: Salomon Bros (estimates).

In the week ended October 12 M1 rose by $2.4bn to $513.6bn.

Third-quarter downturn for Colgate-Palmolive

BY TERRY DODSWORTH IN NEW YORK

DESPITE GOOD increases in the volume of sales, of 10 per cent in the U.S. and 9 per cent overseas, Colgate-Palmolive, the U.S. household products manufacturer, has reported third quarter net profits down by 3 per cent to $54.5m or 66 cents a share against $56.2m last year.

The company said that the setback reflected the strengthening of the dollar in hyper-inflationary countries, as well as price controls and major devaluations in Latin America.

Sales revenues at $1.24bn were virtually unchanged from the previous year, although the company said they would have increased by 9 per cent if currency rates had remained unchanged from 1982.

Mr Keith Crane, the company's chairman, said the results had been aggravated by price controls in Brazil, France, Mexico and Venezuela, as well as an accelerated rate of investment spending in the company's health product programme.

Colgate-Palmolive plans capital expenditures of $190m for plant and equipment in 1983, compared with $140m a year ago.

Net profits for the first nine months of the year amounted to $167m against $166m, while sales fell from $3.71bn to $3.68bn.

● American Motors Corporation has sold its headquarters building for $51m to a Dallas real estate group and two Michigan businessmen, reports AP-DJ from Southfield, Michigan.

The sale of the American Centre, which consists of a 25-story office tower, a two-level shopping mall and 94 acres of land, had been under negotiation for several months.

The purchasers, the Hall Real Estate group of Dallas; Mr Martin Ross, a developer, of Southfield; and Mr Erwin Ziegelman, a Detroit attorney plan to build a second tower that was included in the centre's original plans, Mr Ross said.

Ms Gail Pomerantz from AMC said the sale will allow AMC to release capital tied up in the complex, but declined to say how much the fourth largest U.S. car manufacturer would realise from the sale.

Nakasone bond bill move

TOKYO—The Japanese Government plans legislation in the next session of parliament, starting in December, to enable it to float national bonds abroad announced Mr Noboru Takeshita, the Finance Minister.

The legislation will be designed to enable the flotation of so-called "Nakasone bonds" but their actual issue will depend on the prevalent terms and conditions, including interest rates.

The Finance Minister said it has been argued that the issue of such bonds abroad would run counter to the Government's fiscal reform efforts. But the minister said such bond issues, denominated in dollars, were aimed at strengthening the yen.

The proposed Nakasone bonds are also part of the government's plan to diversify the types of bonds it issues, he said.

Reuter

Midterm loss for CBSF

By Paul Betts in Paris

COMPAGNIE Boussac Saint Freres (CBSF), the large but troubled French textile and retailing group, reported at the weekend a FFr 39m ($4.9m) loss for the first half of this year. The company, which is 51 per cent controlled by the state's Institut de Developpement Industriel (IDI), said the loss was in line with expectations.

First-half sales rose 11 per cent to FFr 2.4bn compared with the first half of last year. The group is currently involved in a complex restructuring programme designed to salvage among other things the operations of the French Willot brothers, the retailers who were caught in a major financial squeeze a few years ago.

Among the Willot brothers assets is the Christian Dior fashion business and a number of leading French retailing concerns.

Since the latest rescue plan was launched last year, CBSF's workforce has been reduced from about 20,000 in June 1982 to just over 18,000. This weekend, the group said it envisaged cutting back its workforce further to about 16,600.

Earnings improve at Texaco Canada

BY ROBERT GIBBENS IN MONTREAL

BETTER PETROLEUM product profit margins and higher production revenues in Western Canada brought a substantial improvement in Texaco Canada's earnings for the third quarter of 1983. Net profit was C$107m (US$86.9m) or 66 cents a share, against C$71m or 56 cents a year earlier, on revenues of C$1.5bn against C$1.18bn.

Nine-month earnings stand at C$256m or C$2.06 a share against C$209m or C$1.68 on revenues of C$4.1bn against C$3.5bn.

● Union Carbide Canada returned to profitability in the third quarter of 1983 in its chemical and metallurgical operations and also received C$7.5m of government aid for the Petromont ethylene operation in Montreal in which it has a one-third stake.

Third-quarter earnings were C$3.4m compared with a loss of C$9m a year earlier. Sales were C$179m against C$168m. Over the first nine month of the year, there was a loss of C$5.5m compared with a loss of C$14m previously.

The company said its main businesses are still affected by the recession and high taxes.

Consd. Bathurst lower

BY OUR MONTREAL CORRESPONDENT

CONSOLIDATED BATHURST, the major pulp and paper, packaging and resource group, says lower profits in the third quarter and first nine months were due mainly to tight margins in certain grades of newsprint and corrugated medium, the shutdown of two older newsprint machines and transition costs for the restructuring of its container interests in a joint company with Macmillan Bloedel.

Nine months' profit was C$25.6m ($20.8m) or 76 cents a share against C$44.6m or C$1.89m a year earlier, on sales of C$1.04bn against C$1.07bn. Positive factors were higher shipments on special grades of newsprint, pulp and glass containers, while linerboard prices improved.

New operations chief for Barlow Rand

● Mr Warren Clewlow has been appointed to the new post of chief operations officer of BARLOW RAND, South Africa's largest industrial company. His appointment is seen as a clear sign that he is being groomed to succeed Mr Mike Rosholt as chairman of the group, *writes Bernard Simon, Johannesburg.*

Mr Clewlow, 46, is at present chairman of C. G. Smith, the holding company of Barlow's food, sugar and packaging interests. The new chairman of C. G. Smith is Mr Bas Kardol, at present head of Nampak, Barlow's packaging arm.

Mr Clewlow, a chartered accountant who has worked for Barlow Rand for the past 21 years, will be responsible for co-ordinating the activities of the group, which is currently being restructured into a number of semi-autonomous product divisions.

He has been a major force in the group's spate of acquisitions in recent years notably in the electronics and food businesses, and has a reputation as a skilled and aggressive negotiator.

Mr Rosholt, 62, remains chairman and chief executive of Barlow Rand. He said that Mr Clewlow's appointment will result in a further reshuffling of senior executives—details of which will be announced later. Mr Rosholt has not yet given any indication of when he plans to retire.

INTERNATIONAL APPOINTMENTS

● THE CHASE MANHATTAN BANK has appointed Mr Brian D. O'Neill, vice-president, to the position of manager, corporate banking for its branches in Buenos Aires, Argentina. He was in strategic planning in New York and before that in the Chase branch in Santiago, Chile.

● Mr Wilbert E. Schauer, executive vice president finance and administration of REXNORD, Milwaukee, has been elected to the board. Mr Schauer was named vice president—finance and law in 1976 and elected to his present position in 1978.

● TRANSAMERICA AIRLINES has appointed Miss Susan Hamilton as director, Ireland. She was manager for both the company's scheduled service sales within the Republic and the airline's advertising and promotional activities throughout the rest of Europe, Africa and the Middle East. Miss Hamilton will have complete responsibility for the company's entire operations within Ireland.

Miss Susan Hamilton, Ireland director of Transamerica Airlines

● Mr Thomas Arthur Dalton has been appointed secretary of LEND LEASE MANAGEMENT, management company of General Property Trust of Australia.

● Mr Thornton F. Bradshaw, chairman of the board, RCA Corp, New York, has been re-elected chairman of THE CONFERENCE BOARD and a trustee. Mr James W. McKee, Jr, chairman, CPC International Inc, New Jersey, was re-elected co-chairman. Mr Edward G. Jefferson, chairman of the board, E. I. du Pont de Nemours and Company, Delaware, was elected a vice-chairman.

● After three years as senior vice-president, finance, Mr Pierre Castonguay has returned to the international division of NATIONAL BANK OF CANADA in Montreal as senior vice-president.

● Mr William E. Grier, vice president, foreign, of Standard Oil Co of California, has been elected to the board of AMAX INC. Mr Grier replaces Mr Perrin Fay, a Socal vice president who has retired from Socal. Mr Grier is a director of Caltex Petroleum Co and Irving Oil.

● BANKERS TRUST has appointed Mr Jan H. W. Beunderman, vice president, manager for the north Asia division of the Asia Pacific group in the international department. He has been relocated to the bank's branch in Admiralty Centre in Hong Kong. Mr Beunderman was vice president and head of Bankers Trust's international department staff function, where he was responsible for strategy implementation.

● Mr John Le Pla, chairman of Unilever's international specialities division and managing director of its UK edible oils company, Loders and Nucoline, is to become chairman of the board of Unilever's oil milling business, UNION DEUTSCHE LEBENSMITTELWERKE and head of its oil milling division in Hamburg. He will retain his responsibility for international specialities division. Mr Le Pla will take up his new appointments in Germany in May next year.

● Mr Fred R. Marcon, senior executive vice president and chief operating officer of Insurance Services Office, Inc. (ISO), has been elected chairman of the board of ISO COMMERCIAL RISK SERVICES, INC. Mr Michael Fusco, vice president-commercial lines, has been elected ISO's senior vice president and actuary. Two vice presidents of ISO have assumed new responsibilities. Mr Richard Lino has been named vice president and actuary-commercial lines actuarial. Mr Lino was vice president and actuary-personal lines actuarial. Mr Philip D. Miller, will become vice president and actuary-personal lines actuarial, succeeding Mr Lino. Mr Miller, vice president-data control, will retain his current duties, as well.

● Mr Michael Duerden has been appointed local director of the Doha office of KENCHINGTON LITTLE INTERNATIONAL.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Amex O/S Fin. 10⅞ 90	100	94⅝	95⅛	0	+0⅛	11.35
Bk. of Tokyo Hd. 11 90	100	96	96½	0	+0¼	11.83
Brit. Col. Hyd. 10⅝ 88	200	97¼	97¾	−0⅛	+0⅛	10.96
Britoil Fin. 11⅞ 90	125	100¼	100¾	+0⅛	+0¼	11.76
CCCE 11¼ 97	100	94¾	95¼	+0⅛	+0⅛	12.51
CCCE 12⅝ 95	75	99⅝	100¼	+0⅛	+0⅞	12.61
CIBC 11 90	75	93⅞	94⅛	+0⅛	+0½	12.45
Citicorp O/S 10⅛ 90	100	93⅛	93⅝	0	+0⅛	11.85
Citicorp O/S 11⅛ 90	100	98	98½	+0¼	+0⅛	12.13
Coca Cola Int. 9⅞ 92	100	91⅛	92⅛	0	+0⅛	11.37
Cr. Suisse Bah. 10⅛ 90	150	†97½	98	e	+0⅛	10.98
Den Norsk Crd. 11¼ 93	50	94	94½	+0⅛	+0⅛	12.27
Du Pont 11¾ 95	150	99⅛	99⅞	0	+0⅛	11.29
ECSC 11⅞ 90	75	99⅞	100⅛	0	+0½	11.82
EDC 11⅛ 87	100	100⅞	101⅛	+0⅛	+0⅛	11.38
EDF 11⅛ 93	100	93½	94	+0⅛	+0⅞	12.24
EEC 11 87	350	98⅞	99⅛	0	+0⅛	11.35
EIB 10⅛ 93	200	93⅞	93⅞	+0⅛	+0⅛	11.92
EIB 11 91	125	95⅝	96⅛	0	+0⅛	11.84
EIB 11⅞ 93	150	98⅞	99⅛	+0⅛	+0⅛	12.07
Electrolux 10⅝ 90	50	92½	92⅞	+0⅛	+0⅞	12.21
Enserch Fin. 11⅛ 93	100	96⅝	97½	+0⅛	+1	12.17
Fuji Int. Fin. 10⅞ 90	100	†94⅞	95⅜	+0⅛	+0⅛	11.98
Gen. Elec. Credit 9¾ 91	100	91⅛	92⅛	0	+0⅛	11.36
GMAC O/S Fin. 10⅛ 90	200	97¼	97¾	+0⅛	+0⅞	11.05
GMAC O/S Fin. 11⅛ 90	100	98½	99	+0⅛	+0⅛	11.64
Honeywell Int. 10⅞ 90	100	97⅞	98⅛	+0⅛	+0½	11.14
Ind. Bk. Japan 10⅞ 88	100	97½	98	+0⅛	+0¼	11.50
Japan Air Lines 10⅞ 98	42	92⅞	93⅛	+0⅛	+0½	11.87
Japan Air Lines 11 93	75	95⅞	96⅛	+0⅛	+0⅛	11.67
J. C. Penney 11⅛ 90	100	99⅜	99⅞	+0⅛	+0¼	11.95
J. P. Mrgn. 11⅛ 90 WW	150	98⅛	98⅞	+0⅛	0	11.66
Levi Strauss Int. 11 90	75	97¼	97¾	0	+0½	11.53
LTCB 10⅛ 90	100	94½	94⅞	0	+0⅛	12.00
LTCB 12½ 90	85	102⅞	103⅛	+0⅛	−0⅛	11.81
Merrill Lynch 10⅛ 90	200	95	95½	+0⅛	+0⅛	11.67
Mitsubishi Cpn. 10½ 90	100	94⅜	95⅛	+0⅛	+0½	11.90
Mitsubishi Fin. 11⅛ 90	100	96⅝	97⅛	+0⅛	+0⅛	12.05
Nippon Credit 11 90	100	95⅛	95⅜	+0⅛	+0⅛	11.99
OKB 10 91	100	91⅛	91⅜	0	+0⅛	11.77
Ontario Hydro 10⅛ 90	250	94⅛	94⅝	+0¼	+0⅞	11.45
Ontario Hydro 11¼ 89	200	100⅝	101⅛	+0⅛	+0⅞	11.03
Pacific Gas & El. 12 91	75	101⅞	102⅛	e	+0⅛	11.58
Prudential O/S 10⅛ 93	100	96⅛	96⅝	0	+0⅛	11.24
Prudential O/S 12⅞ 87	190	104⅜	104⅞	+0⅛	+0⅛	11.24
Saskchwn. Pr. 10⅞ 90	125	99⅛	97	+0¼	+0⅞	11.46
Sears O/S Fin. 11⅛ 93	190	98⅛	98⅞	0	+0⅛	11.87
SNCF 11⅛ 93	100	97⅛	97⅝	+0⅛	+0⅛	11.90
S. Cal. Edison 10¼ 90	75	97⅛	97⅝	+0⅛	+1	11.05
Sumitomo Fin. 10⅞ 90	100	95	95½	+0⅛	+0⅛	11.92
Texaco Capital 9¾ 90	150	92⅞	93⅛	−0⅛	0	11.21
UBS 10 88	100	98⅝	99⅛	+0⅛	+0⅞	10.22
UBS 11 88	190	102	102½	+0⅛	+0⅛	10.47
World Bank 10⅛ 88	190	97	97½	+0⅛	+0⅛	11.15
World Bank 11⅛ 88	100	99⅞	100⅛	+0⅞	+1	11.19
World Bank 11½ 90	190	99	99½	+0⅛	+1⅛	11.64
World Bank 12 93	200	100⅞	100⅜	+0⅛	+0⅛	11.90

Average price changes... On day +0⅛ on week +0⅞

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Air Canada 7⅛ 93	100	101	101⅛	−0⅛	+0⅛	7.16
ANAS 6⅝ 88	100	89⅛	89⅝	e	+0⅛	8.40
Amb Bankg. Cpn. 8 88	100	97¼	97⅝	0	+0⅛	8.64
Austria, Rep. 7⅞ 89	100	99½	100	e	−0⅛	7.97
Austria, Rep. 8 93	100	101⅛	102	−0⅛	+0⅛	7.75
Avon Int. Fin. 7½ 93	100	100⅛	100⅞	0	+0⅛	7.40
Beatrice Foods 7¾ 93	130	103½	104⅛	+0⅛	+0⅞	7.19
BFCE 8⅛ 90	150	101⅛	102	+0⅛	+0⅛	7.89
Comp. T. N. Esp. 8⅛ 93	100	96⅞	97⅛	e	+0⅛	8.67
Dresdner Fin. 4 90 WW	250	106⅛	108	+0⅛	+2	2.77
Dresdner Fin. 4 90 XW	250	83⅛	84½	+0⅛	+0⅛	7.05
ECSC 8 90	100	101⅛	101⅛	−0⅛	e	7.70
EEC 8⅛ 93	250	101⅞	102⅛	0	+0⅛	7.97
EIB 8 93	200	99⅝	100½	+0⅛	+0⅛	8.01
Eurofima 7½ 90	100	100⅞	100⅝	−0⅛	+0⅛	7.42
Finland Rep. 7½ 88	150	98⅞	99⅞	e	+0⅛	7.68
Int. Standard Ele. 7⅞ 93	100	101⅞	101⅞	+0⅛	+0⅛	7.52
Ireland 8⅝ 91	190	100⅝	100⅞	+0⅛	+0⅛	8.51
Japan Govt. Bk. 7½ 90	100	101	101⅛	0	+0⅛	7.22
Kobe City 7 93	120	96⅞	97⅛	0	+0⅛	7.42
LTCB 8 90	100	102⅞	102⅞	0	−0⅛	7.48
Renault Acceptnce. 8 90	190	98⅛	98⅛	0	+0⅛	8.29
SER France 7⅞ 93	100	97⅛	97⅝	+0⅛	+0⅛	8.25
S. African Tran. 8⅛ 90	100	99⅛	99⅝	+0⅛	+0⅛	8.36
World Bank 7½ 90	250	98	98½	+0⅛	+0⅛	7.84
World Bank 7⅞ 89	300	99⅞	100⅛	e	e	7.84

Average price changes... On day +0⅛ on week +0⅛

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Akzo 6⅛ 93	100	98½	99	+0⅛	e	5.78
Bank of Tokyo 5 91	100	102	102⅛	−0⅛	−0⅛	5.65
Bergen, City of 5⅝ 95	40	99½	99⅞	+0⅛	e	5.79
Carls-Tuborg S. 5⅞ 93	60	101½	101⅞	0	−0⅛	5.52
Denmark 6⅛ 91	100	102	102⅛	+1	+1	9.02
EDC 5½ 91	100	100	100⅛	−0⅛	−0⅛	5.35
EIB 5⅛ 93	100	97½	97⅞	−0⅛	−0⅛	5.08
Ex.-Im. Bk. Jap. 5⅞ 91	100	99⅝	100	+0⅛	+0⅛	5.64
Ind. Fd. Finland 6⅛ 91	40	101	101⅛	0	0	6.08
Int.-Am. Dv. Bk. 6⅛ 93	100	†100⅞	100⅞	0	+0⅛	9.05
Japan Dev. Bank 5⅛ 93	100	†98	98½	+0⅛	−0⅛	5.74
Japan Dev. Bank 5⅞ 93	100	101⅛	102	+0⅛	+0⅛	5.62
Kansai Elec. Pwr. 9 91	100	101½	101⅛	0	−0⅛	5.73
Kawasaki Steel 6⅛ 91	100	101	101⅛	+0⅛	0	5.93
Montreal Urban 5¾ 93	100	101	101⅛	0	−0⅛	5.59
Mount Isa Fin. 6 93	100	102	102⅛	0	−0⅛	5.71
Nisshin Steel 6⅛ 91	100	100	100⅛	0	0	6.22
Oster. Draukraft 6 93	100	102⅛	102⅝	0	−0⅛	5.85
Osterr. Post 6⅛ 91	100	102½	102⅞	0	−0½	5.89
Quebec Hydro 5½ 93	100	†100½	101	+0⅛	−0⅛	5.39
Sekisui House 9 93	100	†100⅛	101⅛	−0⅛	+0⅛	5.85
Sumitomo Hvy. I. 6 91	100	99⅛	100	+0⅛	+0⅛	6.02
Sumitomo M. Ind. 6 91	100	†100	100½	−0⅛	−0⅛	5.95
Tokyo Elec. Pwr. 5⅞ 91	100	100⅛	101	0	0	5.73
Trizec Corpn. 6⅛ 91	100	100⅞	100⅞	−0⅛	+1⅛	9.14
World Bank 5⅞ 93	100	99	99⅛	+0⅛	0	5.74

Average price changes... On day 0 on week 0

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 8⅛ 92	19	104⅝	106⅛	0	−0⅛	7.86
EIB 8⅛ 92	15	102⅝	103⅛	0	−0⅛	7.77
Japan Airlines 7⅞ 87	9	†101⅛	102⅛	0	0	7.07
New Zealand 7⅝ 89	15	102	102½	0	0	7.14
World Bank 8⅛ 92	20	103½	104⅛	0	0	7.72

Average price changes... On day 0 on week 0

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Farm Credit 12¼ 90 C$	75	†98⅝	99⅛	0	0	12.46
Narcan 12⅞ 93 C$	60	†96⅝	97⅛	0	−0⅛	13.32
TO Mt. Cpn. 12½ 88 C$	40	†100½	101	−0⅛	+0⅛	12.27
Quebec Hyd. 12⅞ 93 C$	50	†100⅛	100⅝	−0⅛	+0⅛	12.67
Royal Trstco. 12⅛ 88 C$	50	†99⅞	100⅛	0	+0⅛	12.61
World Bank 12⅛ 90 C$	75	†100	100½	+0⅛	+0⅛	12.19
Xerox Canada 12 88 C$	40	†102⅛	102⅝	0	+0⅛	11.28
EEC 11⅛ 93 ECU	70	100⅛	100⅞	−0⅛	0	11.15
Cenfinance 11 90 ECU	60	98⅝	99⅛	0	−0⅛	11.21
Algemene Bk. 8⅛ 88 Fl	150	100⅝	101⅛	+0⅛	+0⅛	8.47
Sk. Mees Hope 8 88 Fl	75	101⅛	102⅛	+0⅛	+0⅛	8.48
Elec. Sup. Bd. 8⅛ 88 Fl	75	97⅞	98⅛	0	+0⅛	8.24
PHP 8⅛ 88 Fl	50	100½	101	+0⅛	+0⅛	8.54
Sw. Ex. Cred. 7⅞ 88 Fl	100	96⅝	96⅞	+0⅛	+0⅛	8.75
World Bank 9 88 Fl	100	102⅝	102⅞	−0⅛	+0⅛	8.31
OKB 14 88 FFr	400	100½	101½	0	−0⅛	13.37
Solvay et C. 14⅞ 88 FFr	200	101⅛	102⅛	0	−0⅛	13.54
BFCE 11½ 88 £	50	98	98⅛	0	+0⅛	11.93
British Oxyg. 11⅛ 91 £	90	100⅛	101	+0⅛	+0⅛	11.59
CEPME 11⅛ 95 £	35	†98⅝	99⅛	0	+0⅛	11.36
EEC 11⅞ 91 £	50	100	100⅛	+0⅛	+0⅛	11.77
EEC 11⅞ 93 £	90	100⅛	101	+0⅛	+1	11.76
Fin. for Ind. 10⅞ 90 £	20	94⅛	94⅞	0	+0⅛	11.71
Finland Rep. 11⅞ 88 £	50	98	99⅛	−0⅛	0	12.03
F. Mat. Oranj. 12⅝ 92 £	30	102⅛	102⅞	+0⅛	+0⅛	12.15
Gen. Elec. Co. 12½ 88 £	90	102⅛	103⅛	+0⅞	+0⅛	11.61
III 10⅛ 93 £	25	93⅝	94⅛	+0⅛	+0⅞	11.86
Mort. Bk. Fin. 11⅛ 88 £	15	97	98	0	+0⅛	12.35
Norsk Hydro 12 90 £	30	101⅛	102⅛	0	−0⅛	11.50
Sweden 11⅛ 93 £	90	96⅞	97⅛	0	+0⅞	11.81
Sw. E. Cred. 11⅛ 88 £	30	97½	98⅛	0	+0⅛	11.83
World Bank 11⅛ 88 £	100	97⅞	98⅝	+0⅛	+0¼	11.69
World Bank 11⅛ 91 £	75	99⅛	100½	0	0	11.32
Euratom 11 93 LuxFr	500	102	103	+0⅛	+0⅛	10.54
Europarat 10⅛ 93 LuxFr	600	102½	103½	e	e	10.22

FLOATING RATE NOTES	Spread	Bid	Offer	C.date	C.cpn	C.yld
BFCE 5⅛ 87	0⅛	99⅝	100	27/1	10⅞	10.89
BFCE 5⅛ 88	0⅛	99⅝	99⅞	20/1	10.16	10.20
Caisse Nat. Tele. 5⅛ 90	0⅛	99⅝	99⅝	21/10	9.56	9.91
CCF 5⅛ 95	0⅛	98⅝	99⅝	7/4	9.94	9.98
CCF 5⅛ 98	0⅛	99⅞	100⅛	24/3	10.19	10.15
CEPME 5⅛ 88 WW	0⅛	99⅝	100⅛	3/12	10.56	10.57
CEPME 5⅛ 92	0⅛	99⅝	100	10/12	10½	10.51
Chemical NY 5⅛ 94	‡0⅛	100⅛	100⅞	23/12	10	9.93
CNCA 5⅛ 95 XW	0⅛	99⅛	99½	7/12	10	10.06
CNT 5⅛ 91	0⅛	99⅛	99⅝	6/11	9⅛	9.32
Credit Agricole 5⅛ 97	0⅛	99½	99⅝	24/3	10.31	10.35
Credit Lyonnais 5⅛ 94	0⅛	99½	99⅝	5/1	10.31	10.36
Credit Lyonnais 5⅛ 97	0⅛	99½	99⅝	1/4	10	10.04
Credit Nat. 5⅛ 94	0⅛	99⅝	99⅞	9/3	10⅝	10.78
EDF 5⅛ 95 XW	0⅛	99⅞	100⅛	10/2	11⅛	11.38
EEC 5 90	0⅛	99⅞	100⅛	6/1	10.18	10.17
Kansallis Osake 5⅛ 92	0⅛	100⅛	100½	6/11	9⅛	9.09
Long Term Credit 5⅛ 92	0⅛	100	100⅛	27/11	9⅝	9.74
J. P. Morgan 5⅛ 97	§0⅛	100⅛	101	12/11	10.81	10.72
New Zealand 5⅛ 87	0⅛	100⅞	100⅛	7/4	9⅞	9.85
NZ Steel Dev. 5⅛ 92	0⅛	100⅛	100⅝	22/12	10⅛	10.21
Nippon Credit 5⅛ 90	0⅛	100½	100⅞	10/2	11¼	11.18
Societe Gen. 5⅛ 90 XW	0⅛	99⅛	99½	9/11	9⅛	9.18
Societe Generale 5⅛ 95	0⅛	99⅞	100⅛	1/3	10.31	10.31
Sweden 5⅛ 88	0⅛	100⅛	100⅛	26/2	10.18	10.16
Sweden 5⅛ 93	0⅛	100⅞	100⅝	3/2	11.19	11.13

Average price changes... On day 0 on week 0

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
Bridgestone Tire 5½ 96	3/82	470	115⅞	116⅝	+0⅛	2.87
Canon 7 97	7/82	748.2	207⅛	209⅛	+0⅛	14.23
Daiwa Sec. Co. 5½ 98	10/83	508	96½	97⅛	+0⅛	2.14
Hitachi Cable 5⅛ 98	2/82	515	108	109½	+0⅛	5.14
Honda Motor 5⅛ 98	8/83	884	117⅛	118⅛	+5⅛	5.97
Honda Motor 5½ 97	3/83	759.5	135⅛	137⅛	+8⅞	6.09
Kumagai Gumi 6½ 97	10/82	400	142	143½	−0⅛	0.94
Kyowa Hakko 6⅛ 87	2/83	762	111	112½	+1	8.95
Minebea Co. 5½ 98	5/83	667	115½	116½	+0⅞	−0.27
Mitsubishi Elec. 5⅛ 98	6/83	396	112⅞	113⅞	+1⅞	5.88
Nippon Electric 5⅛ 87	2/82	765.9	165⅞	167⅛	+3⅛	2.94
Nippon Oil Co. 5½ 98	4/83	964	123	124	+1½	1.02
Nissan Motor 5⅛ 98	4/83	770	102½	103⅞	+2⅛	10.21
Olympus Optic. 6⅛ 97	12/82	1331	103	104½	+1⅛	5.44
Orient Finance 5⅛ 97	3/82	927.2	96⅞	98⅛	−0⅛	1.51
Orient Leasing 5⅛ 98	6/83	2690	95⅛	96⅛	+0⅛	2.99
Secom 5 98	11/83	2920	119	120½	−0⅛	−0.83
Sumitomo Elec. 5½ 87	3/82	577.3	113⅞	115⅛	+0⅛	0.39
Yamaichi Sec. Co. 5 98	8/83	472	96½	98	+0⅞	2.52
Yamanouchi Ph. 4 90	10/83	1808	95⅛	96⅛	+0⅛	7.70
HEC Cpn. 3½ 93 SwFr	6/83	978	138	140	+4	2.16
Bettsu Ppr. 3⅛ 93 SwFr	9/83	719	101½	103½	+0⅛	11.91
Asics 5 92 DM	12/83	520	106⅛	108	+0⅛	13.97
Kanishiraku 6⅛ 88 DM	6/82	619	118½	119½	−0⅛	4.15
Sum Realty 6⅛ 92 DM	2/83	365	123⅛	124⅛	+0⅞	−2.43

EUROBOND TURNOVER
(nominal value in $m)

	Cedel	Euro-clear
U.S. $ bonds		
Last week	9,023.4	16,512.1
Previous week	5,099.1	12,088.8
Other bonds		
Last week	1,765.2	1,867.7
Previous week	1,079.6	925.3

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg.day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Kredietbank NV; Credit Commercial de France; Credit Lyonnais; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bank of Tokyo International; Blyth, Eastman, Paine, Webber International; Chase Manhattan; Citicorp International Bank; Credit Commercial de France (Securities) London; Daiwa Europe NV; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Merrill Lynch; Morgan Stanley International; Nomura International; Orion Royal Bank; Robert Fleming and Co.; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strauss Turnbull; Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on October 21

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing prices October 21

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
17¼	7⅝	AAR	.44	3.1	16	42	14⅞	14¼	14¼	-⅛
52⅝	29½	ACF	1.40	2.8	64	346	49⅞	49¼	49¾	+⅛
20	14⅛	AMF	.50	2.9		523	17⅝	17⅜	17⅜	-⅛
38¼	15	AMR Cp			14	3298	31⅞	30	31	-⅞
19	15	AMR	pf2.16	12		24	18⅞	18⅞	18⅞	
29¼	24⅝	AMR	pf2.13	6.1		578	34⅞	34	34⅞	-⅛
15¾	7½	APL			27	104	13⅛	13	13⅛	-¼
56	51¾	ARA	2.05	4.4	12	316	49⅞	46	46¾	-3
79⅞	49	ASA	3e	5.8		548	65	53½	63½	-1⅛
33¼	11¼	AVX	s .32	1.3	37	97	25⅞	24½	24½	-1
53⅞	34¾	AbtLab	1	2.0	19	1005	51⅞	50⅞	51¼	-⅛
30⅝	23¾	AccoW	n .50	2.0	19	71	24¾	24½	24¾	+¼
27½	16¾	AcmeC	.40	1.7		53	23	22½	23	+¼
14⅛	7⅝	AcmeE	.32b	2.9	275	2	11	11	11	
24⅞	6	AdmDg	.04	.2	17	12	20⅞	20⅞	20¾	
17⅞	14⅞	AdaEx	1.73e	9.8		26	17⅞	17⅞	17½	
19¾	6⅛	AdmMl	.24	1.7	7	19	14¼	13⅞	14¼	
18⅞	8¼	Advest	.12	1.0	9	95	11⅞	11½	11½	-⅛
34⅞	10⅞	AMD	s		50	2003	30⅞	29	29⅞	-¼
24⅞	12⅞	Aerflx			15	190	14¼	14¼	14½	
44⅞	32⅞	AetnLf	2.64	7.4	7	2855	35⅞	35¼	35⅞	-⅛
66	55½	AetL	pf5.18e	9.3		470	56¼	55¾	56	-½
40½	17½	Ahmns	.80	2.0	17	341	30½	30½	30½	-⅛
7⅛	2⅞	Aileen				44	4⅛	4⅛	4⅛	
51	30⅞	AirPrd	1	2.2	13	321	45	44⅞	44½	-½
27¼	13¾	AirbFrt	.60	2.5	23	31	23¾	23⅞	23⅞	+½
2½	½	AlMoa	s		16	165	2	1⅞	2	+⅛
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Continued on Page 24

Closing prices October 21

AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Continued on Page 25

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Continued from Page 23

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

W—W—W

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
29½	18	WICOR	2.14	7.8	8	30	27¾	27	27	
47½	29¾	Wachov	1.58	3.4	10	169	45½	45	45¾	
34½	16¾	Wackht	.44b	2.0	14	83	22½	22	22½	
11⅞	4⅛	Wainoc				119	9¾	9¼	9½	
48¾	18	WalMrt	s .14	.3	37	1208	42	40¾	40¾	−⅞
38¾	22¾	Walgrn	s .72	1.9	16	854	37⅞	36¾	37⅞	+⅞
22	14½	WkHRg	g1.32			77	21½	20¾	21½	+⅝
31	18¼	WICSv	s .36	1.2	18	47	30	29¾	29¾	−⅛
47¾	24½	WalLm	1.20	3.4	11	498	36½	35½	35½	−⅝

Continued on Page 25

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a—dividend also extra(s). b—annual rate of dividend plus stock dividend. c—liquidating dividend. cld—called. d—new yearly low. e—dividend declared or paid in preceding 12 months. g—dividend in Canadian funds, subject to 15% non-residence tax. i—dividend declared after split-up or stock dividend. j—dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k—dividend declared or paid this year, an accumulative issue with dividends in arrears. n—new issue in the past 52 weeks. The high-low range begins with the start of trading. nd—next day delivery. P/E—price-earnings ratio. r—dividend declared or paid in preceding 12 months, plus stock dividend. s—stock split. Dividends begins with date of split. sls—sales. t—dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u—new yearly high. v—trading halted. vi—in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd—when distributed. wi—when issued. ww—with warrants. x—ex-dividend or ex-rights. xdis—ex-distribution. xw—without warrants. y—ex-dividend and sales in full. yld—yield. z—sales in full.

WORLD STOCK MARKETS

Indices

NEW YORK DOW JONES

	Oct. 21	Oct. 20	Oct. 19	Oct. 18	Oct. 17	Oct. 14	1983 High	1983 Low	Since C'mpil'tn High	Since C'mpil'tn Low
● Industr'ls	1248.88	1281.52	1248.75	1250.81	1268.78	1263.52	1284.65 (13/10)	1027.04 (5/1)	1284.65 (13/10/83)	41.22 (2/7/32)
H'me Bnds	—	72.12	72.01	72.00	71.87	71.80	77.84 (6/5)	69.85 (6/6)	—	—
Transport.	604.04	591.36	585.89	595.47	501.82	580.56	581.82 (17/10)	434.94 (5/1)	591.82 (11/10/83)	12.32 (8/7/32)
Utilities	138.82	138.54	138.99	137.15	138.20	137.80	140.04 (8/10)	119.51 (13/1)	163.32 (20/4/69)	10.5 (28/4/42)
TradingVol 000's	81,648	88,000	81,790	21,083	77,730	71,800	—	—	—	—

● Day's high 1260.77 (1258.74) low 1231.81 (1241.06)

	Oct. 14	Oct. 7	Sept. 30	Year ago (Approx)
Indust'l div. yield %	4.41	4.32	4.51	2.42

STANDARD AND POORS

	Oct. 21	Oct. 20	Oct. 19	Oct. 18	Oct. 17	Oct. 14	1983 High	1983 Low	Since Cmpil't High	Since Cmpil't Low
Indust'ls	187.38	188.25	188.09	189.48	192.48	191.80	194.84 (18/10)	154.95 (3/1)	194.84 (10/10/83)	3.62 (30/6/32)
Comp's'te	165.95	166.98	166.78	167.81	170.43	169.86	172.65 (10/10)	138.54 (3/1)	172.65 (12/10/83)	4.40 (1/6/32)

	Oct. 19	Oct. 12	Oct. 5	Year ago (Approx)
Indust'l div. yield %	3.23	3.65	3.90	4.60
Indust'l P/E ratio	14.45	14.73	14.51	10.20
Long Gov. Bond yield	11.32	11.57	11.21	10.52

N.Y.S.E. ALL COMMON

Oct. 21	Oct. 20	Oct. 19	Oct. 18	1983 High	1983 Low
95.74	96.32	96.13	96.91	99.63 (10/10)	80.92 (24/1)

Rises and Falls	Oct. 21	Oct. 20	Oct. 19
Issues Traded	1,263	1,952	1,977
Rises	594	263	402
Falls	974	323	1,125
Unchanged	595	593	334
New Highs	32	33	20
New Lows	02	13	25

MONTREAL

	Oct. 21	Oct. 20	Oct. 19	Oct. 18	1983 High	1983 Low
Industrial	458.71	455.87	452.80	456.45	468.90 (28/9)	331.19 (4/1)
Combined	412.29	415.65	415.81	418.64	441.29 (28/9)	323.12 (4/1)
TORONTO Composite	2425.2	2444.3	2436.3	2449.8	2588.2 (26/9)	1949.8 (4/1)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
Gulf Oil	3,547,400	46⅞	+½	Merrill Lynch	1,314,800	29¾	—
Citicorp	2,010,500	31	−2⅝	Hewlett-Pack	1,218,500	37	−⅛
ATT	1,882,500	62⅛	+¼	Paradyne	1,114,000	14¾	−1
IBM	1,555,400	127	−2⅜	Superior Oil	1,052,700	36	+1⅜
Digital Equip.	1,490,100	67⅞	+½	Chrysler PR	889,500	38	+1⅜

WORLD INDICES

	Oct. 21	Oct. 20	Oct. 19	Oct. 12	1983 High	1983 Low
AUSTRALIA						
All Ord. (1/1/80)	686.5	684.5	679.8	682.1	738.1 (12/9)	487.8 (4/1)
Metals & Mins. (1/1/80)	512.9	518.9	508.1	508.6	814.2 (5/9)	411.8 (4/1)
AUSTRIA						
Credit Aktien (2/1/62)	54.36	54.50	54.63	54.72	58.8 (6/5)	48.48 (16/2)
BELGIUM						
Belgian SE (31/12/63)	125.24	125.15	126.07	127.18	134.48 (1/8)	100.50 (4/1)
DENMARK						
Copenhagen SE (3/1/83)	195.63	193.17	181.85	189.09	204.22 (13/9)	100.04 (3/1)
FRANCE						
CAC General (31/12/82)	(e)	139.7	140.0	141.4	141.5 (17/10)	98.1 (3/1)
Ind Tendance (31/12/82)	(c)	141.8	148.7	158.1	158.7 (17/13)	99.0 (3/1)
GERMANY						
FAZ-Aktien (31/12/58)	337.12	334.15	334.69	335.53	337.12 (21/10)	241.89 (25/1)
Commerzbank (Dec 1953)	1009.3	989.8	992.2	989.7	1060.0 (21/13)	727.9 (25/1)
HONG KONG						
Hang Seng Bank (31/7/64)	784.92	780.11	784.34	789.04	1102.64 (21/7)	690.08 (4/10)
ITALY						
Banca Comm Ital. (1972)	185.42	185.18	182.11	183.96	214.33 (21/6)	160.46 (18/1)
JAPAN**						
Nikkei-Dow (16/5/49)	9370.21	9318.55	9290.88	9349.08	9563.26 (12/10)	7803.18 (25/1)
Tokyo SE New (4/1/68)	683.68	678.60	676.88	681.29	688.60 (7/10)	674.51 (25/1)
NETHERLANDS						
ANP-CBS General (1970)	141.2	140.8	141.1	142.7	144.8 (11/10)	100.1 (4/1)
ANP-CBS Indust (1970)	115.4	115.1	115.5	118.7	118.4 (10/13)	83.6 (4/1)
NORWAY						
Oslo SE (4/1/83)	216.42	216.25	209.94	216.44	217.80 (19/10)	98.81 (4/1)
SINGAPORE						
Straights Times (1966)	957.99	982.68	952.53	951.75	992.62 (25/8)	712.29 (5/1)
SOUTH AFRICA						
Gold (1958)	727.5	726.4	735.7	755.8	1088.5 (1/2)	694.3 (28/3)
Industrial (1958)	906.1	905.7	811.9	812.4	988.7 (28/6)	794.8 (3/1)
SPAIN						
Madrid SE (31/12/82)	121.82	121.89	121.86	121.38	121.86 (19/10)	98.32 (11/1)
SWEDEN						
Jacobson & P. (1/1/58)	1415.71	1420.33	1411.26	1432.00	1528.50 (8/9)	808.18 (3/1)
SWITZERLAND						
SwissBankCpn. (31/12/58)	343.8	342.8	342.8	343.8	347.0 (4/8)	284.4 (4/1)
WORLD						
Capital Intl. (1/1/70)	—	184.5	179.7	180.9	185.6 (10/10)	154.5 (6/1)

(**) Saturday Oct. 15: Japan Nikkei-Dow 9384.34; TSE 682.81.

Base values of all indices are 100 except Australia All Ordinary and Metals—500. NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975. † Excluding bonds. ‡ 400 Industrials. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. e Unavailable.

AUSTRIA

1983 High	1983 Low	Oct. 21	Price %
220	206	Credit'stalt Pfd.	212
370	181	Goesser	320
410	358	Interunfall	410
217	201	Laenderbank	219
400	255	Perlmooser	322
179	148	Steyr Daimler	150
262	171	Veitscher Mag	201

BELGIUM/LUXEMBOURG

1983 High	1983 Low	Oct. 21	Price Frs.
1,435	990	ARBED	1,062
4,750	3,700	Bank Int A Lux	4,500
3,300	2,030	Bekaert B	2,940
2,090	1,595	Ciment BR	1,995
182	86	Cockerill	173
4,715	3,360	Delhaize	4,403
0,325	1,875	EBES	2,250
6,310	4,460	Electrobel	3,090
2,900	0,250	Fabrique Nat	2,250
3,200	2,710	GB Inno BM	2,210
2,425	1,450	GBL (Brux)	2,342
2,500	1,740	Gevaert	2,480
5,080	3,600	Hoboken	4,525
2,000	1,724	Intercom	1,775
6,010	4,300	Kredietbank	3,300
9,250	4,500	Pan Hldgs	9,200
6,040	4,810	Petrofina	3,920
7,240	5,910	Royale Belge	3,950
3,000	2,305	Soc. Gen. Banq	9,685
2,025	1,200	Soc. Gen. Belge	1,745
5,270	3,755	Sofina	4,940
3,460	0,190	Solvay	3,220
3,500	2,645	Traction el	3,070
4,380	2,620	UCB	3,870
4,400	0,210	Vieille Mont	3,245

DENMARK

1983 High	1983 Low	Oct. 21	Price %
553.4	332.6	Aarhus Olie	465
320	130	Andelsbanken	291
398	321	Baltica Skand	635
300	172.3	CopHandelsbank	259
830	408.3	D. Sukkerfab	768
302.6	197	Danske Bank	223
188	86.6	East Asiatic	175
1,350	650	Forenede Brygg.	1,200
298	148	Forenede Damp.	170
557	170	GNT Hldg	500
720	970	I.S.S.B.	700
650	997	Jyske Bank	606
3,425	1,935	Novo Ind.	3,235
324	183.4	Privatbanken	289
312	157.3	Provinsbanken	312
324.2	170	Smidth (FL)	258
1,079	683	Sophus Berend.	050
323	97.2	Superfos	396

CANADA

1983 High	1983 Low	Stock	Oct. 21
30⅝	16⅞	AMCA Intl.	23¼
25⅝	12¼	Abitibi	23½
20⅞	15⅝	Agnico Eagle	15⅝
21	19¼	Alberta Energy	19¼
49⅝	33⅛	Alcan Aluminium	45¾
37½	24¾	Algoma Steel	31
18⅝	2½	Asbestos	11⅛
33⅝	25	Bk. Montreal	20⅝
45⅞	32	Bk. Nova Scotia	44⅛
30⅛	22½	Bell Canada	22⅞
18⅞	13¼	Bombardier	10¾
29⅝	16⅛	Bow Valley	24⅝
27	20	BP Canada Res.	05¼
32⅞	19⅝	Brascan A	34⅝
4.20	9.70	Brinco	2.25
14½	2¼	B.C. Forest	12¼
22¾	23⅛	CIL Inc.	29½
10	2	CadillacFairview	2⅛
41⅛	22	Campbell Red Lk	28⅝
18⅛	12¼	Can Ciment Pf	13⅛
[illegible]	[illegible]	[illegible]	[illegible]

ITALY

1983 High	1983 Low	Oct. 21	Price Lire
[illegible]	[illegible]	[illegible]	[illegible]

NETHERLANDS

1983 High	1983 Low	Oct. 21	Price Fls
[illegible]	[illegible]	[illegible]	[illegible]

NORWAY

1983 High	1983 Low	Oct. 21	Price Kroner
[illegible]	[illegible]	[illegible]	[illegible]

AUSTRALIA

1983 High	1983 Low	Oct. 21	Price Aust. $
[illegible]	[illegible]	[illegible]	[illegible]

FRANCE

1983 High	1983 Low	Oct. 20	Price Frs.
[illegible]	[illegible]	[illegible]	[illegible]

SINGAPORE

1983 High	1983 Low	Oct. 21	Price $
[illegible]	[illegible]	[illegible]	[illegible]

SWEDEN

1983 High	1983 Low	Oct. 21	Price Kroner
[illegible]	[illegible]	[illegible]	[illegible]

GERMANY

1983 High	1983 Low	Oct. 21	Price Dm.
[illegible]	[illegible]	[illegible]	[illegible]

SWITZERLAND

1983 High	1983 Low	Oct. 21	Price Frs.
[illegible]	[illegible]	[illegible]	[illegible]

HONG KONG

1983 High	1983 Low	Oct. 21	Price H.K.$
[illegible]	[illegible]	[illegible]	[illegible]

JAPAN

1983 High	1983 Low	Oct. 21	Price Yen
[illegible]	[illegible]	[illegible]	[illegible]

SOUTH AFRICA

1983 High	1983 Low	Oct. 21	Price Rand
[illegible]	[illegible]	[illegible]	[illegible]

SPAIN

1983 High	1983 Low	Oct. 21	Price Pts
959	209	Bco Bilbao	250
508	955	Bco Central	256
919	200	Bco Exterior	218
934	201	Bco Hispano	207
968	208	Bco Santander	239
667	208	Bco Vizcaya	306
149	106	Dragados	153
57.7	43.7	Hidrola	47.2
42	39.2	Iberduero	46
102.5	59	Petroleos	29
96	60.9	Telefonica	98.5

NOTES:—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

AMERICAN STOCK EXCHANGE CLOSING PRICES

Continued from Page 24

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

S—S—S

T—T—T

U—U—U

V—V—V

W—W—W

X—Y—Z

NEW YORK CLOSING PRICES

Continued from Page 24

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

X—Y—Z

Allianz claims bid will lift capital value by 11%

BY ERIC SHORT

THE FORMAL offer document setting out the bid by Allianz Versicherung, West Germany's largest insurance group, for the UK composite Eagle Star Holdings was dispatched over the weekend, only three days after the offer was made last Wednesday.

Yet the document contains little that adds to the information given in the original statement and does not explain the speed with which Allianz's advisers Morgan Grenfell are dealing with the offer.

The offer is 500p in cash for each share in Eagle Star not already owned by Allianz, and thus values Eagle Star at £692m—the largest ever bid in nominal money terms. Allianz now owns 41,497,500 shares of Eagle Star—the merest fraction under 30 per cent of the equity.

In discussing the financial effects of the bid, the document claims that shareholders will get an 11 per cent increase in the value of their capital—the comparison being made between the offer value and the 450p market value of a share on October 18.

It also claims that shareholders get at least a 114 per cent increase in income by reinvesting the cash in gilts with an interest yield of at least 11 per cent gross.

Sir Denis Mountain, Eagle Star's chairman, has already stated that the price must be based on net asset values and the price being offered is at least one-third too low. The defence document will probably point out that it is misleading to compare immediate income from an equity to that from a gilt.

Allianz reiterates its statement in the original offer that its intention is simply to increase its stake in Eagle Star from its present level of just under 30 per cent, but that it cannot do this without making a full offer. The conditions for acceptance remain complex and stringent.

It repeats its assertion that it wishes Eagle Star to continue as a British company, listed on the Stock Exchange, with the majority of the board, including certain of Allianz's representatives to be of British nationality.

Allianz reaffirms that a closer association between the two groups would benefit Eagle Star and its shareholders and that it wishes to examine in detail the possible areas of co-operation between the two companies and put into effect schemes which would benefit Eagle Star and its shareholders, though no details of these schemes are given.

Finally, Allianz confirms the safeguard of rights of Eagle Star employees and that it would wish Eagle Star to be run for the benefit of all shareholders.

This is a further indication that Allianz merely wants to increase its stake to 40 per cent, a point confirmed by Morgan Grenfell.

Indeed, Mr Tony Ratcliff, chief general manager of Eagle Star, said the whole bid appeared to be a smoke screen to enable Allianz to increase its minority holding to 40 per cent and represented a misuse of the Takeover Panel rules. These rules concerning partial bids had been designed to protect both outside and small shareholders from having a shareholder with effective control forced on them. The bid represented a brazen attempt to circumvent the rules, he said.

The closing date for the offer is 3 pm on Saturday November 12. But the crucial date is the following Monday when Allianz's stockbrokers will be able to commence buying Eagle Star shares again on the market.

However, Allianz will immediately have to revise its offer up to the maximum price which it may pay for any further shares.

Eagle Star's advice to shareholders is to sit tight until Allianz makes a more realistic price offer. The company, with its advisers Hill Samuel, is still deciding on the timing of the issue of its defence document.

Brownlee

The three major shareholders in Brownlee, timber merchants, have disposed of their entire aggregate 30 per cent interest in the company's equity.

Two of the holders, Meyer International and International Timber, accounted for 20.24 per cent with the remaining 9.41 per cent attributable to the Globe Investment Trust.

Based on Friday's closing price of 71p, up 7p, the disposals were worth a total £3.75m, and values the company at £7.54m.

Black & Edgington

Following the offer by Black & Edgington (Holdings) for the preference shares of Black & Edgington, acceptances were received in respect of £236,937 of the preference stock (82.2 per cent) by 3 pm on October 18.

The offer will close on November 17.

Grosvenor Capital invests £0.5m in Electron House

Grosvenor Development Capital, the £10m Slough-based development finance company, has purchased a 30 per cent equity interest in Electron House (Holdings), the electronics distribution group.

Grosvenor has invested £500,000 in purchasing ordinary shares and providing new funds for working capital. In addition, Williams and Glyn's Bank has provided £650,000 in loan and overdraft facilities.

As a result Mr Robert Leigh, Electron managing director, holds 40 per cent of the equity with the remaining 30 per cent held by private investors.

Electron, based in Orpington, Kent, has three principal operating subsidiaries: House of Power, Zaerix Electronics and Hall Electric which import, export and distribute a wide range of electronic components.

The deal is Grosvenor's third major financing operation in the last few months. In July it announced a 24 per cent holding in a management buyout of Marcol Computer Systems and in August it was involved in a restructuring of the Monotype Corporation.

Mr David Beattie, Grosvenor managing director, points out: "Electron House is a well managed and growing company and fits in well with our wide spread of investments in the electronics industry."

Bejam plans to speed up expansion programme

FOOD AND domestic freezer retailer Bejam intends to accelerate its expansion programme Mr John Apthorp, chairman, tells shareholders in his annual statement.

"Each year's added freezer ownership increases the number of towns in which we could successfully open stores," he says.

"In some of these locations it will prove possible to acquire suitable premises but increasingly we find it necessary to commission the construction of purpose built stores to achieve the right size and shape and adequate car parking; the same is true where we are seeking to resite inadequate stores."

As reported on October 13 the group opened 14 stores in the year to July 2 1983—when pre-tax profits of £12.01m (£11.75m) were earned following a static second half. With earnings per share after tax given as 8.04p (7.08p) the year's dividend was lifted to 3.25p net (2.75p).

Since reporting with the annual figures that sales for the current year were ahead because of the hot summer weather, Mr Apthorp now notes that the general sales level has significantly exceeded budgets, and he anticipates reporting another record year.

In the current year the group has started a small and experimental agreement with British Home Stores under which it supplies two BHS stores with frozen food while BHS will supply two Bejam stores with chilled foods. Mr Apthorp says the directors are optimistic that both elements will be capable of profitable expansion, but it will be 1984 before such an assessment can be made.

At the year end shareholders funds stood at £36.23m (£30.98m), and fixed assets were valued at £51.6m (£38.86m). Net current liabilities came to £8.03m (£1.43m) and there were creditors falling due after one year of £4.22m (£3.21m). During the year there was an increase in working capital of £6.01m (decrease £365,000) and an increase in net liquid funds of £1.86m (£1.52m).

Meeting: Butchers Hall, E.C., November 18, noon.

RECENT ISSUES

EQUITIES

Issue price	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −	Net Div.	Times Covered	Gross Yield	P.E. Ratio
410	F.P.	7.10	24	20½	✠A. & M. Hire 10p	22	...	b0.1	11.1	0.7	13.9
*120	F.P.	22.11	118	108	✠Acorn Computer 1p	108	−1	—	—	—	89.2
*230	F.P.	2.11	290	257	Atlantic C'mp'ters 10p	277	+2	b8.25	6.2	1.2	14.6
*435	200	10.2	220	190	Brit. Petroleum	196	...	20.25	1.6	6.7	13.0
200	F.P.	—	215	185	‖Bryson Oil & Gas 20p	190	+5	—	—	—	—
‡‡	F.P.	—	170	160	✠Cent'l Ind TVN.V 5p	160	−5	—	—	—	22.6
*105	F.P.	28.10	108	107	Coin Inds. 10p	107	...	3.2	2.4	4.4	14.5
§80	F.P.	—	85	75	✠DJ Security Al'ms 10p	82	+2	u2.1	b5.5	3.7	10.0
97	F.P.	—	105	97	Europ'n Assets Dfl. 1	103	+1	Q19½	1.0	9.1	—
140	F.P.	4.11	170	140	✠Flextech 10p	142	+2	—	—	—	21.4
§60	F.P.	12.10	73	65	✠Freshbake Foods 5p	73	+2	bq1.7	2.7	3.3	14.8
‡‡	F.P.	—	72	55	Ivory & Sime 0.1p	65	+1	u0.25	11.8	0.5	21.3
—	F.P.	11.11	32	21	Lon. Midland Ind D'fd	31	...	—	—	—	—
§65	F.P.	31.10	71	68	✠Mainmet Hldgs 10p	71	...	—	—	—	14.6
*285	F.P.	—	310	293	Oxford Instruments 5p	308	...	b1.0	8.8	0.5	31.6
‡150	F.P.	4.11	161	156	✠PCT Group 10p	158	...	b4.8	2.1	4.3	14.9
‡‡	F.P.	—	37	32	P'sonal Assets Tst 12½p	36	...	—	—	—	—
185	F.P.	11.11	234	214	Telemetrix 5p	216	...	b1.4	5.5	0.9	28.1
100	F.P.	25.11	100	21	Tottenham Hotspur	61	−5	b4.0	1.9	6.3	10.0

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −
99.296	£25	29.11	28	22	Allied-Lyons 11¼% Deb 2009	25½	+⅛
95.736	£25	—	26	25⅝	Australia 11⅝ pc. Ln.	[illegible]	...
*100	£10	2.1	11½	11¼	Bristol Waterworks 6.5% Red. Prf. 1988	11⅛	...
100	F.P.	27.10	104¼	101	E'bourne W'rworks 12½pc R.Deb. 2014	104½	...
27.268	£25	23.1	25⅞	25	Ireland 12¾% 2008	25⅝	−⅛
*100p	25p	6.12	33¼p	25p	LASMO 2½% Cum Red Pref	31¾p	...
‡‡	Nil	—	3pm	1pm	Lon. Shop Prop. 9pc Con. 94-99 Ser II	1pm	−¼
—	—	—	100	99⅞	Nationwide 10⅞% Bds	99⅞	...
—	F.P.	28.10	114½p	106p	Oceonics 10¾% Cum. Red. Pref. 1995	110½p	...
§100	F.P.	7.10	103p	93p	Rockware 7.7% Cum. Cnv. 2nd Pref.	98p	...
98.679	£25	31.8	28	23½	Trafford Park Est. 11¼% 2007/11	27	...
99.124	£25	25.10	28½	25¾	Westland 12¾% Deb 2008	27¼	+⅛
§100	F.P.	17.11	102	101⅞	York Waterworks 6.75pc Red. Prf. 1988	101¾	...

"RIGHTS" OFFERS

Issue price	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −
92	F.P.	28.10	119	103	Anglo-Indonesian	103	−4
IR55	Nil	—	8pm	7pm	Aran Energy 20p	7pm	...
80	F.P.	25.11	95	89	Assoc. Paper	95	+2
23	F.P.	30.11	27	24	C. H. Industrials 10p	24	...
50	F.P.	11.11	61	50	✠Colman Milne 10p	50	...
440	F.P.	—	575	502	Exco Int'l. 10p	526	−5
83	F.P.	28.10	93	83	Garner Booth	84	...
17	F.P.	28.10	20	16	Helene of London 10p	18	...
20	F.P.	18.11	52	41	Inter-City Inv. 20p	44	...
120	Nil	—	11pm	7pm	MFI Furniture 10p	10pm	...
50	F.P.	—	88	62	‡‡Marinex Pet. 10p	65	+5
35	F.P.	25.11	45	40½	Munton Bros. 10p	41½	...
11	F.P.	25.11	42	16	✠Parkfield Foundries 5p	42	+2
120	F.P.	11.11	130	122	Pritchard Servs	130	+1
8½	Nil	2.12	8½pm	5½pm	✠Sampang (Java) 2½p	8pm	+1
310	F.P.	25.10	368	340	Tate & Lyle £1	362	+4
210	F.P.	11.11	240	223	Utd. Newspapers	230	+3

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimate. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. g Assumed dividend and yield. u Forecast dividend cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1983. H Dividend and yield based on prospectus or other official estimates for 1983-84. Q Gross. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. ● Figures or report awaited. § Placing price. p Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation merger or take-over. ‖‖ Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. ‡ Effective issue price after scrip. † Formerly dealt in under special rule. †† Dealt in under Rule 163 (3). ✠ Unlisted Securities Market.

PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus*) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

Company	Date	Announcement last year
Akroyd and Smithers	Nov 18	Final 10.0
Allied Irish Banks	Nov 8	Interim 4.5
Allied Lyons	Nov 30	Interim 2.2
Allnatt London Props	Nov 9	Interim 1.9
Amersham Intl	Nov 15	Interim [illegible]
*Anglo Amer Corp SA	Nov 8	Interim 35c
Assoc British Foods	Nov 11	Interim 1.5
Assoc Leisure	Nov 30	Interim 2.0
*ANZ	Nov 21	Final 14 cents
BPB Inds	Nov 23	Interim 5.0
*Bank of Ireland	Nov 10	Interim 5.0
Beecham	Nov 14	Interim 4.1
Boots	Nov 25	Interim 3.5
Brengreen	Nov 27	Interim 0.6
*ECA	Nov 7	Final 2.8
Brit & Commwlth Shipping	Nov 11	Interim 7.0
Brockhouse	Nov 25	Final 0.1
Burnett and Hallamshire	Nov 25	Interim 2.0
Burton	Nov 23	Final 5.25
Capital and Counties	Dec 1	Interim 1.2
Carr (J.) Doncaster	Nov 29	Final 1.3
Charter Consolidated	Nov 30	Interim 3.75
Comet	Nov 24	Final 2.88
Common Bros	Nov 22	Final nil
Courtaulds	Nov 25	Interim 1.0
Davis (Godfrey)	Nov 18	Interim 1.5
Dawson International	Dec 1	Interim 2.2
*De La Rue	Nov 8	Interim 6.6
Electrocmpts	Nov 6	Interim 1.0
Elliott (B.)	Nov 23	Interim nil
Extel	Nov 29	Interim 2.8
Ferguson Industrial	Nov 13	Interim 2.2
Fine Art Devs	Dec 1	Interim 1.1
*Flight Refuelling	Nov 1	Interim 1.12
French Kier	Nov 25	Interim 1.36
GEC	Dec 2	Interim 1.0
*Gill & Duffus	Oct 28	Interim 3.6
*Gt Portland Estates	Nov 8	Interim 1.0
*Hambros	Nov 21	Interim 15.15
*HAT Group	Nov 21	Interim 1.8
Heath (C. E.)	Nov 22	Interim 8.0
Hepworth (J.)	Nov 2	Final 3.21
*Highland Dist.	Oct 24	Final 1.86
Hinton (Amos)	Nov 22	Interim 2.6
Int'l Paint	Nov 16	Final 2.0
*Johnson Matthey	Nov 24	Interim 3.0
*Kwik Save	Nov 17	Final 3.4
LRC Intl	Nov 29	Interim 1.08
Land Securities	Nov 17	Interim 3.0
London & L'pool Tst	Nov 16	Interim 1.5
*Lucas Inds	Nov 7	Final 5.0
Marks and Spencer	[illegible]	Interim 1.35
Marshalls Halifax	Nov 22	Interim 1.0
*Metal Box	Nov 22	Interim 5.04
*MEPC	Nov 30	Final 5.25
National Bk Aust	Nov 18	Final 12 cents
North British Props	Nov 3	Final 2.0
Pauls and Whites	Dec 2	Interim 2.5
*Peachey Prop	Oct 28	Final 3.0
Polly Peck	Nov 28	Final 8.0
Powell Duffryn	Nov 25	Interim 4.7
RIT & Northern	Nov 16	Interim 2.0
Rediffusion	Nov 25	Interim 1.36
*Reed Intl	Nov 3	Interim 4.0
Redland	Nov 25	Interim 2.5
Renold	Nov 22	Interim nil
Royal Bank of Scotland	Dec 2	Final 2.8
Sainsbury (J.)	Nov 3	Interim 1.9
*Samuel Props	Oct 26	Final 3.3
Scapa	Dec 2	Interim 2.0
600 Group	Dec 2	Interim 2.34
Sketchley	Nov 16	Interim 3.6
Smiths Inds	Nov 8	Final 7.0
Smith (W. H.)	Nov 17	Interim 1.75
Tesco Stores	Nov 17	Interim 1.35
Unilever	Nov 16	Interim 8.96
Unilever NV	Nov 16	Int. Fl 2.964
Valor	Nov 17	Interim 0.834
Wedgwood	Nov 28	Interim 1.75
*Whitbread	Nov 8	Interim 1.88
*Wolseley-Hughes	Nov 2	Final 10.29

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims—Bishopsgate Trust, Reed Executive.

Finals—Border and Southern Stockholders Trust, Highland Distilleries, Japan Assets Trust.

FUTURE DATES

Interims—

Flight Refuelling	Nov 1
Great Portland Estates	Nov 8
O.K. Bazaars (1929)	Oct 26
Richardsons Westgarth	Oct 25
Scott and Robertson	Oct 31

Finals—

British Car Auction	Nov 1
Manganese Bronze	Oct 27
Safeguard Industrial Investments	Nov 2

RESULTS AND ACCOUNTS IN BRIEF

MURRAY GLENDEVON INVESTMENT TRUST—Results for the year ended July 31, 1983, reported September 13. Fixed assets £44.64m (£27.5m). Net current liabilities £12.26m (£6.75m). Shareholders' funds £30.28m (£18.75m). Meeting, Glasgow, November 14, at 10.30 am.

PRECIOUS METALS TRUST (investment company)—Results for year ended July 31 already known. Investments £16.34m (£6.11m for period September 16, 1981 to July 31, 1982). Net current assets £1.27m (£2.74m). Shareholders' funds £17.61m (£8.85m). Meeting, 68 St James's St., SW, on November 16 at 2 pm.

ARBUTHNOT GOVERNMENT SECURITIES TRUST—Results for the year to August 31, 1983. Net revenue after all charges £4.14m (£4.43m). Gross revenue £4.32m (£4.53m).

LANCA (handbag maker)—Turnover for first half 1983 was £1.2m (£1.19m) and operating profit £77,000 (£88,000). Profit £84,000 (£76,000) before tax £44,000 (£36,000). Earnings 4.73p (3.58p).

BASE LENDING RATES

Bank	Rate	Bank	Rate
A.B.N. Bank	9 %	■ Hambros Bank	9 %
Allied Irish Bank	9 %	Heritable & Gen. Trust	9 %
Amro Bank	9 %	■ Hill Samuel §	9 %
Henry Ansbacher	9 %	C. Hoare & Co. †	9 %
Arbuthnot Latham	9 %	Hongkong & Shanghai	9 %
Armco Trust Ltd.	9 %	Kingsnorth Trust Ltd.	10 %
Associates Cap. Corp.	9½%	Knowsley & Co. Ltd.	9½%
Banco de Bilbao	9 %	Lloyds Bank	9 %
Bank Hapoalim BM	9 %	Mallinhall Limited	9 %
BCCI	9 %	Edward Manson & Co.	10½%
Bank of Ireland	9 %	Meghraj and Sons Ltd.	9 %
Bank Leumi (UK) plc	9 %	Midland Bank	9 %
Bank of Cyprus	9 %	■ Morgan Grenfell	9 %
Bank of Scotland Ω	9 %	National Bk. of Kuwait	9 %
Banque Belge Ltd.	9 %	National Girobank	9 %
Banque du Rhone	10 %	National Westminster	9 %
Barclays Bank	9 %	Norwich Gen. Tst.	9 %
Beneficial Trust Ltd.	10 %	R. Raphael & Sons	9 %
Bremar Holdings Ltd.	9 %	P. S. Refson & Co.	9 %
Brit. Bank of Mid. East	9 %	Roxburghe Guarantee	9½%
■ Brown Shipley	9½%	Royal Trust Co. Canada	9 %
CL Bank Nederland	9 %	Standard Chartered ‖	9 %
Canada Perm't Trust	10 %	Trade Dev. Bank	9 %
Castle Court Trust Ltd.	9½%	TCB	9 %
Cayzer Ltd.	9 %	Trustee Savings Bank	9 %
Cedar Holdings	10 %	United Bank of Kuwait	9 %
■ Charterhouse Japhet	9 %	United Mizrahi Bank	9 %
Choulartons	10½%	Volkskas Intnl. Ltd.	9 %
Citibank Savings ¶	10½%	Westpac Banking Corp.	9 %
Clydesdale Bank	9 %	Whiteaway Laidlaw	9½%
C. E. Coates	9½%	Williams & Glyn's	9 %
Comm. Bk. of N. East	9 %	Wintrust Secs. Ltd.	9 %
Consolidated Credits	9½%	Yorkshire Bank	9 %
Co-operative Bank *	9 %		
The Cyprus Popular Bk.	9 %		
Dunbar & Co. Ltd.	9 %		
Duncan Lawrie	9 %		
E. T. Trust	9½%		
Exeter Trust Ltd.	10 %		
First Nat. Fin. Corp.	11½%		
First Nat. Secs. Ltd.	11½%		
Robert Fraser	10 %		
Grindlays Bank ‡	9 %		
■ Guinness Mahon	9 %		

■ Members of the Accepting Houses Committee.
* 7-day deposits 6.5%, 1-month 6.75%. Short-term £8,000/12 months, 8.1%.
† 7-day deposits on sums of: under £10,000 5½%, £10,000 up to £50,000 6½%, £50,000 and over 7½%.
‡ Call deposits £1,000 and over 5½%.
‖ 21-day deposits over £1,000 6½%.
§ Demand deposits 5½%.
¶ Mortgage base rate.
Ω Money Market Cheque Account—8.90%. Effective annual rate—9.27%.

Granville & Co. Limited

(formerly M. J. H. Nightingale & Co. Limited)

27/28 Lovat Lane London EC3R 8EB Telephone 01-621 1212

Over-the-Counter Market

Capitalisatn. £000's	Company	Price	Change on week	Gross div.(p)	Yield %	P/E Actual	P/E Fully taxed
5,822	Ass. Brit. Ind. Ord.	127	−3	6.4	5.0	7.4	9.7
—	Ass. Brit. Ind. CULS	136	−3	10.0	7.4	—	—
4,284	Airsprung Group	74	—	6.1	8.2	21.1	21.1
575	Armitage & Rhodes	23	+1	—	—	—	—
29,672	Bardon Hill	238	—	7.2	3.0	6.7	19.8
1,738	CCL 11pc Conv. Pref.	139	—	15.7	11.3	—	—
2,529	Cradico Group	160	−16	17.6	11.0	—	—
4,466	Deborah Services	57	−2	6.0	10.5	—	—
8,650	Frank Horsell	148	+2	—	—	6.3	10.3
—	Frank Horsell Pr Ord 87	143	+2	8.7	6.1	6.0	9.8
—	Frederick Parker	49	−2	7.1	14.5	3.1	4.9
690	George Blair	32	—	—	—	—	—
2,365	Ind. Precision Castings	58	−2	7.3	12.6	16.1	20.0
4,872	Isis Conv. Pref.	203	+3	17.1	8.4	—	—
5,363	Jackson Group	108	+1	4.6	4.2	5.5	10.9
28,293	James Burrough	205	−3	11.4	5.6	11.3	11.8
1,357	Robert Jenkins	133	−3	20.0	15.0	16.5	10.4
3,540	Scruttons "A"	68	—	5.7	8.3	11.5	8.3
2,197	Torday & Carlisle	90	−3	2.8	3.2	—	—
3,297	Unilock Holdings	21	−1½	1.0	4.8	13.7	20.0
11,347	Walter Alexander	89	—	6.8	7.6	7.6	10.3
6,068	W. S. Yeates	280	−3	17.1	6.6	4.0	8.3

Licensed dealer in Securities.

هكذا من الأصل

UK COMPANY NEWS

Westminster asked to accept share offer

Milbury, the housebuilding and property group controlled by Mr Jim Raper's St. Piran Holdings, called on Westminster Property Group shareholders to accept the share offer rather than the cash offer for their company.

The original cash or share offer for Westminster was detailed to shareholders almost two weeks ago. The bid became unconditional on October 17, and by yesterday Milbury had won control of almost 61 per cent of Westminster's shares.

Milbury is offering 35½p in cash for Westminster shares, or two Milbury shares for every five in Westminster. At Milbury's present stock market price of 95p, the share offer values Westminster at almost £11m, or 38p per share.

Mr Doug Allen, a director of Milbury, told shareholders that Milbury was keen for them to accept the share alternative.

Share information

The following securities have been added to the Share Information Service:

Associated Telecommunications Section:	(Industrials)
Derma-Lock Medical Corp.	(Americans)
Goring Kerr	(Industrials)
Metal Sciences (Hldgs.)	(Industrials)
Milbury	(Buildings)
Nationwide B. S. 11½pc Bonds 20/8/84	(Loans—Building Socs.)
Nationwide B. S. 11pc Bonds 3/9/84	(Loans—Building Socs.)
Polytechnic Marine	(Electricals)

Logica offer by tender at 140p minimum price

BY DOMINIC LAWSON

THE UK's largest independent computer software company is applying for a Stock Exchange listing, with a market valuation of at least £49m. The small London merchant bank Close Brothers is offering for sale by tender 10.4m Logica shares at a minimum price of 140p each.

Of the shares being offered, over 6.1m are being sold by existing shareholders, while the rest are new shares which will raise at least £5.2m net to fund future growth.

Logica was founded in 1969, since when staff and turnover have grown uninterruptedly. In the year to June 30 1983 the company made record pre-tax profits of £3.3m on turnover of £42m. Logica currently has 1,600 staff, of whom about 1,100 hold graduate or post graduate qualifications.

Logica's activities comprise consultancy and project management, custom built systems, software and hardware, software products and office automation.

Logica operates subsidiaries in seven countries: the UK, the U.S., the Netherlands, Belgium, Sweden, West Germany and Australia. There is no profits forecast, but the prospectus notes that "revenue for the first quarter of the current financial year was over 35 per cent greater than for the corresponding peiod last year."

After the offer, 30 per cent of Logica will be owned by the public, 38 per cent by directors and staff, and 32 per cent by existing institutional shareholders.

Applications for the shares should be made by 10 am October 27, and dealings begin on November 3. Brokers to the issue are Hoare Govett.

The issuing house, Close Brothers, was the subject of a management buy-out from Consolidated Gold Fields in 1978. The managing director of Close, Mr Rod Kent, said "this is the first public flotation we have handled since the buy-out, and I believe it is the first such exercise by Close Brothers since the 1960's."

● comment

Logica claims that this is a "real" tender offer, by which it appears to mean that the minimum tender price is too modest to be considered a proper valuation of the company. Logica is probably right, but it is a pity that the company did not have the courage of its instincts, and offer the shares with no minimum price, thus avoiding the expense of underwriting the issue. Logica's turnover growth makes for a beautiful diagram of exponential growth. The profits graph is slightly less elegant, describing a repeated pattern of five steps forward, one step back. The dip in 1980 showed clearly the risks involved in a company which operates largely on one-off contracts bid for on a fixed-price basis. For a business whose assets really are its staff, it is surprising that there are no service contracts, but the shares are already widely spread among employees, and a share option scheme is now being worked out. Those whose only option is that of tendering for the shares this week, should think in terms of 200p a share. That price would still leave the shares at a discount to those of software quoted companies Systems Designers and Micro Focus.

Inco cuts losses in third quarter

BY KENNETH MARSTON, MINING EDITOR

CANADA'S Inco, the major world nickel mining group, continued to suffer sizeable losses in the third quarter of 1983. At the pre-tax level, however, there was a gradual improvement, reports Nicholas Hurst from Toronto.

A pre-tax loss in the quarter of U.S.$56.6m (£37.7m) is reduced from $83.5m in the second quarter and $125m in the first three months of the year. It compares with a loss of $106.5m in the third quarter of 1982.

But unusual tax adjustments totalling approximately $25m and relating to prior years, all accounted for in the latest quarter's results, have pushed the net loss to $72.1m, equal to 80 cents per share. This follows a second quarter net loss of $39.7m and goes against a loss of $66.4m in the same period of last year.

For the first nine months of 1983 Inco's total net loss amounts to $188.7m compared with $140.5m in the same period of last year. The 1982 total net loss was $204.2m.

Inco says that the nine months' loss reflects low prices for nickel and alloys products together with a decline in deliveries of precious metals. The 1983 figures also include shut-down costs of $81m which compare with strike, shut-down and severance costs of $112m in the first nine months of last year.

Looking on the brighter side, Inco notes that U.S. indicators show the beginning of e rise in spending on capital goods—the first such improvement since the first quarter of 1981—which should help nickel sales. Nickel prices have also improved this year.

Authorised Units—continued

Equity & Law Un Tst Mngrs (a) (b) (c)
Amersham Rd, High Wycombe. 0494 33377

Euro Tst Acc	62.8	67.3xd	....	1.45

Robert Fleming & Co Ltd
8 Crosby Square, EC3A 8AN. 01-638 5858

AmExFd*	£270.87	278.80	....	0.84
JapExFd*	£150.25	163.35	....	1.16

Next subscription day Oct 17 1983
*Fleming American Property Unit Trust.
Latest issue price (15 8) US$10.567.
Units are issued on Feb 15, May, Aug, Nov.
*Fleming Property Unit Trust.
Latest issue price (29.9) £2,070.
Units are issued on March 25, June 24, Sept 29 & Dec 25.
*Unauthorised.

Guardian Royal Ex Unit Mngrs Ltd (a)
Royal Exchange EC3V 3LS. 01-638 2020.

Gilt & Fixed	113.5	117.5	+0.8	9.89
Growth Eq	95.5	102.7	+0.2	2.86
Guardhill	173.7	100.8	+0.1	—
Nth Amer	94.8	101.8xd	...	—
Pacific	182.9	118.7xd	+1.1	0.39
Prop Shares	98.1	182.5	+1.1	2.27
Smaller Cos	104.5	112.xd	+1.0	1.80

H.B.L. Unit Trust Mngrs Ltd (a) (c) (g)
Premier NT Admin, 5 Rayleigh Rd, Hutton, Brentwood, Essex 0277-227300

SmllrCosTst	48.4	52.0	+0.4	4.54
Nth Amer	48.9	51.5	+0.4	2.25
Japan&FarTst	52.6	55.4xd	+8.5	1.32
ScandinvaTst	48.9	51.5	+0.5	1.46

Hexagon Services Ltd
4 Gt St Helens London EC4P 3EP. 8788 45322

Austin Frs	106.1	111.7	....	2.41
Brewin Cap	79.4	85.6	....	8.62
Brewic Inc	71.2	75.0	....	4.19
Canada Gth	100.5	118.5	....	8.96

Lawson Fund Managers Ltd (a) (c) (g)
45 Charlotte Sq, Edinbgh 2. 031-225 6001

CharitsSoFd	47.4	49.4	....	5.20
Penny Sh Fd	13.5	14.5	....	1.8
Aust & Pac	0.1	8.9	....	0.8
High Yield	19.5	20.8	....	10.4
Do Accum	20.4	21.8	....	10.4

MGM Unit Managers Ltd
MGM House, Heene Road, Worthing 01-622 8211

High Inc	123.8	129.7xd	+0.4	8.8c
(Accum Uts)	128.5	135.8xd	+8.4	6.04
UK Growth	115.1	123.8xd	+0.5	3.55
(Accum Uts)	116.6	125.4xd	+0.3	3.33

MLA Unit Trust Management Ltd
Old Queen St, SW1A 8JG. 01-222 8576

MLA Uts	170.8	185.7	...	2.88
MLA Int	27.0	29.2	....	0.88

The Money Market Trust
61 On Victoria St EC4N 4ST. 01-220 0952

Call Fund	—	—	....	8.79
7 Day Fund	—	—	....	8.94

*Unauthorised—Sterling Deposit Fund.

Offshore and Overseas—continued

Actibonds Investment Fund SA
37 rue Notre Dame, Luxembo'rg. Tel 47971

Actibonds In	—	$20.25	....	—

Alliance Capital Management Intl Inc
62/62 Queen St, London EC4. 01-248 8801
Alliance International Dollar Reserves
Distribution Oct 10-Oct 18 (0.001655) (9.85%)

Health Care Oct 28	$8.87	....	—
TechnologyOct20	$21.28	....	—
Quasar Oct 28	$47.74	....	—

Bamford Brandt Guernsey Mngt Ltd
PO Box 71, St Peter Port, Guernsey. 0481 26541

Tech&Coms	£9.05	9.60	....	—

Jardine Fleming & Co Ltd
46th Floor, Connaught Centre, Hong Kong.

Curr Bd	$12.85	—	....	—
(Accum)	$18.18	—	....	—
Asean	$9.74	—	....	—
(Accum)	$9.74	—	....	—
American	$9.10	—	....	—
(Accum)	$9.18	—	....	—
Mgd Cur	$18.15	—	+0.03	9.58
(Accum)	$10.15	—	+0.03	0.50

Lazard Brothers & Co (Jersey) Ltd
PO Box 108, St Helier, Jersey, CI. 0534 37361

LazBrFar£	$15.98	14.88	....	1.00
CpBGd	$140.79	142.12	....	11.02

[illegible]

Insurances—continued

[illegible]

AUTHORISED UNIT TRUSTS

FT UNIT TRUST INFORMATION SERVICE

[illegible]

INSURANCES

[illegible]

INSURANCE & OVERSEAS MANAGED FUNDS

Black Horse Life Ass. Co. Ltd.
71, Lombard St., EC3. 01-623 1288

Black Horse Man. Fd		233 44		
Managed Inv Fd	157 35	165 64	...	—
Property Fd	151 07	159 03	...	—
Fixed Interest Fd.	147.14	154.89	...	—
Cash Fd.	135 95	143 11	...	—
Income Fd	171 41	180.50	...	—
Extra Income Fd	162 77	170 71	...	—
Worldwide Growth Fd.	231.62	243 83	...	—
Balanced Fd	172.42	181 50	...	—
Smlr Co's & Recv. Fd	203.25	213 95	...	—
Int. Technology Fd	270 97	285.24	...	—
Nth. Amer. & Gen. Fd.	160 18	179.18	...	—
Energy Int. Fd	107.69	113.36	...	—
Pacific Basin Fund	132.41	139.38	...	—

British National Life Assurance Co. Ltd.
Harlands Rd, Haywards Heath. 0444 414111

Managed	112.8	111.8	-0.1	—
Property	106.2	112.9	+1.4	—
Equity	112.3	118.2	-1.3	—
International	128.5	135.3	-0.7	—
Fixed Interest	101.6	106 9	+0.1	—
Deposit	99.3	104.5	+0.1	—
Managed Pen. Cap.	112.4	118.3	-0.2	—
Property Pens. Cap.	106.2	111 7	+1 6	—
Equity Pens. Cap.	105.8	111 4	-2.1	—
Intnl. Pens. Cap	137.5	141.6	-0 4	—
Fixed Int. Pens. Cap.	99.2	104 4	...	—
Deposit Pens. Cap.	97.2	102.4	+0.1	—

Canada Life Group
2-6, High St., Potters Bar, Herts. P. Bar 51122

Equity Gth Sept 29		94.5	...	—
Rtmt. Fed. Aug 6		265 4	...	—
Managed Pen Fund	177 0	186.3	...	—
Property Pen Fund	114.0	120.0	...	—
Index Lnkd Pen Fund	111.6	111 4	...	—
Managed	119 4	125.7	+0.8	—
Property	104 0	109 5	...	—
Gilt and Fixed Interest	106.0	111 6	+0.6	—
Index-Linked	98.4	103 6	+0.3	—
Equity	116.2	122.4	+0.1	—
Cash	103.5	109.0	...	—
Midland Bk. Unit Tst	115.0	121.9	+0.4	—
Midland Bank Intnl.	137.4	144.7	+0.3	—

Cannon Assurance Ltd.
1 Olympic Way, Wembley HA9 0NB. 01-902 8876

Equity Units	£36.89	—	+0.20	—
Property Units	£17.16	—	...	—
Equity Bond/Exec	£24 03	23 43	+0.14	—
Prop. Bond/Exec	£22 43	23.74	...	—
Bal. Bd./Exec/Unit	£23.19	24.54	+0.06	—
2nd Equity Acc.	187 7	198.6	+0.9	—
2nd High Inc/Acc	143.3	151.6	+1 0	—
2nd Property Acc	171 4	181.4	...	—
2nd Managed Acc.	168.2	177 9	+0.4	—
2nd Deposit Acc	144.5	152 9	...	—
2nd Gilt Acc	141.9	150.2	+0.4	—

G.T. Management Ltd.
16 Finsbury Circus, Lond. EC2M 7DJ. 01-628 0131

G.T. Plan Bond Fund	123 2	124 7	+0 3	—
GT Pln High Yld Fnd	114 1	120 2	+1 6	—
GT Plan Far East Fnd	111.2	117 1	+0 1	—
GT Plan N. Am Fd	135.5	142.7	-1.4	—
GT Pln UK&G.E. Fnd	127.7	134.5	+2.8	—
GT Pln Wrldwde Fnd.	131.1	138.0	-1.9	—
GT Pension Bnd Fnd.	133 0	140.0	+0.2	—
GT Pen High Yld Fd	129.2	136.0	+1.8	—
GT Pen Far East Fd	134 7	141 8	+0.3	—
GT Pen N. Am. Fd.	195.7	206.3	-2.7	—
GT Pen UK & G.E. Fd	147.9	155.7	+2.8	—
GT Pen Worldwide Fd.	139.2	146.4	-2.3	—

Prices for Accum. Units only.

Assicurazioni GENERALI S.p.A.
117, Fenchurch St., EC3M 5DY. 01-488 0733
Intl. Managed Bond 166 9 | 175 7 | — | —

General Portfolio Life Ins. C. Ltd.
Crossbrook St., Cheshunt, Herts. Waltham X 31971

Portfolio Fd. Acc.	247.8		-2.3	—
Portfolio Fd. Init.		204.2	...	—
Portfolio Fd. Cap.		255.8	...	—
Investment A its	246.9	260.0	...	—

Gresham Unit Ass. Ltd.
2-6, Prince of Wales Rd. B'mouth. 0202 767655

Managed Fd	267.8	281.3	...	—
Money Fd	155.2	163.4	...	—
Equity Fd	224.8	236.7	...	—
Fixed Int. Fd	116.0	122.2	...	—
Property Fd	171.0	180.2	...	—
Managed Pen. Fd	245.3	258.2	...	—
Equity Pension Fd	182.6	192.4	...	—
Fixed Int. Pen. Fd.	162.9	171.7	...	—
High Yield Pen. Fd.	161.0	169.6	...	—
Money Pension Fd.	127.1	134.5	...	—
Property Pension Fd	126.9	133.7	...	—

Gresham/Framlington

American & Gen. Fd.	254.3	268.0	-4.8	—
Income Fd	177.6	187.1	+1.6	—
Int'l. Growth Fd	265.2	279.4	-3.1	—
Capital Fund	186.8	196.8	+0.3	—
Recovery Fund	142.1	149.7	-0 4	—

Growth & Sec. Life Ass. Soc. Ltd.
48, London Fruit Exchange, E1 6EU 01-377 1122

Flexible Finance	1,526	284.0	...	—
Landbank Secs.	66.15	162.8	...	—
Landbank Secs. Acc.	185.6	190.4	...	—
G. & S. Super Fd	£11.376	122.5	...	—

Guardian Royal Exchange
Royal Exchange, EC3. 01-283 7101

Guardian Assurance
Property Bonds 306.6 | 318.3 | ... | —

GRE Linked Assurance Ltd.
Managed Initial 201.6 | 212.3 | +1 0 | —

Lloyds Life Assurance—cont.

Gartmore Funds—Series A

American Oct 18	178.2	187.6	...	—
British Oct 18	125.5	132.2	...	—
Commodity Oct 18	120 8	127.2	...	—
Extra Inc Oct 18	111.6	115.5	...	—
Far Eastern Oct 18	97.1	102.3	...	—
High Inc Oct 18	108.3	114.1	...	—
Income Oct 18	138.8	146.2	...	—
Global Strategy Oct 18.	168.3	177.2	...	—
Special Sits Oct 18	127.3	134.0	...	—
Gilt Oct 18	106.3	111.9	...	—
Japan Oct 18	154 2	162.4	...	—
UK Small Co's Oct 18	118.5	124.8	...	—
Man Gwth Oct 18	147.4	155.2	...	—
Astrln. Oct 18	109 9	115.7	...	—
Oil & Energy Oct 18	118.5	124.8	...	—
Gold Share Oct 18	78 3	82.5	...	—

London A'deen & Nthn. Mtl. Assur. Ltd.
129 Kingsway, London, WC2B 6NF. 01-404 0393
'Asset Builder' 64 0 | 67.9 | ... | —

London Indemnity & Gnl. Ins. Co. Ltd
18-20, The Forbury, Reading 583511.

Money Mngr Oct 15	60.3	65.0	...	—
MM Flexible Oct 6	52.3	55.2	...	—
Fixed Interest Oct 1	54 T	57 1	...	—

London Life Linked Assur. Ltd.
100, Temple St., Bristol, BS1 6EA. 0272 279179
See adjacent Page Mon-Fri and Stock Exchange Page Sat.

London & Manchester Gp.
Winslade Park, Exeter EX5 1DS. 0392 52155

Invest. Tst. Fd. Cap.	284.4	—	-0.4	—
Invest. Tst. Fd. Acc.	301.3	—	-0.4	12.3
Property Fund Cap.	117.4	—	+0.1	—
Property Fund Acc.	124.8	—	+0.1	4.4
Flexible Fund Cap.	177.2	—	+0.8	—
Flexible Fund Acc.	187.1	—	+0.9	4.4
Fixed Int. Fd. Cap.	139 5	—	+0.9	—
Fixed Int. Fd. Acc.	147.5	—	+0.9	—
Gtd. Deposit Fd. Cap.	139.8	—	...	—
Gtd. Deposit Fd. Acc.	145 8	—	...	—
Equity Fund Cap.	125.1	—	+0.7	—
Equity Fund Acc.	231.8	—	+0.8	—
International Fd. Cap.	135.3	—	...	—
International Fd. Acc.	142.4	—	...	—
Capital Gwth. Fd.	404 4	—	+1.9	—
Moneymaker Fund	166.6	—	+0.7	—

Property Growth Assur. Co. Ltd.
Leon House, Croydon CR9 1LU. 01-680 0606

Property Fund		298.2	...	—
Property Fund (A)		298.3	...	—
Agricultural Fund		1,111.5	...	—
Agric. Fund (A)		1,082.2	...	—
Abbey Nat. Fund		227.9	...	—
Abbey Nat. Fd. (A)		228.9	...	—
Investment Fund		135.6	+0.2	—
Investment Fund (A)		132.6	+0.2	—
Equity Fund		395.9	-1.5	—
Equity Fund (A)		388.1	-1.5	—
Money Fund		216.5	+0.3	—
Money Fund (A)		212.6	+0.3	—
Actuarial Fund		218.6	...	—
Gilt-edged Fund		190 3	+0.7	—
Gilt-Edged Fd. (A)		190.5	+0.7	—
Retire Annuity		554.0	...	—
Immed. Ann'ty		193.6	...	—
International Fd.		256.0	-6.0	—
Bldg. Soc. Life Fd.		104.5	...	—

Property Gth Pens & Annuities Ltd

All Wther Ac. Uts.	247.0	260.0	...	—
Inv Fd. Uts.		294.3	...	—
Pension Fd Uts.		252.7	...	—
Conv. Pens. Fd		291.7	...	—
Cnv. Pns. Cap. Ut.		218.5	...	—
Man. Pens. Fd.		321.9	+1 0	—
Man. Pens. Cap Ut		250 0	+1.0	—
Prop. Pens. Fd		281.8	...	—
Prop Pens.Cap.Uts.		213 1	...	—
Bldg. Soc. Pen. Ut.		253.5	...	—
Bldg. Soc. Cap. Ut.		195.1	...	—
Gilts Pens. Fd.		169.1	+0.7	—
Gilts Pens. Fd. Cap.		147.9	+0.6	—
Equity Pens. Fd.		241.0	+0.9	—
Equity Pens. Fd. Cap.		211.2	+0.7	—

Providence Capitol Life Assc. Co. Ltd.
30 Uxbridge Road, W12 8PG. 01-749 9111

Equity Acc.	102.0	107 7	...	—
Fixed Interest Acc.	92.4	98.0	...	—
Intnl. Acc.	90.9	95.4	...	—
Managed Acc.	98.5	95.4	...	—
Property Acc.	112.5	118.7	...	—
Money Acc.	74.3	78.4	...	—
Special Market Acc.	67.2	70.9	...	—
Japan Acc.	61.9	65.2	...	—
North America Acc.	73 6	77.5	...	—
Pacific Acc.	49.6	52.4	...	—
Technology Acc	69.T	73.6	...	—
Nat. Resources Acc.	53.3	56.3	...	—

Standard Life Assurance Company
3 George St., Edinburgh EH2 2XZ. 031-225 2552.

Managed	195.8	206.2	+1.6	—
Property	152.4	160.5	...	—
Equity	221.0	232.7	+2.8	—
International	205.9	216.8	-0.8	—
Fixed Interest	165.5	174.3	...	—
Index Linked	98.6	103.8	...	—
Cash	130.9	137.8	...	—
Pension Managed	228.8	240.9	+2.1	—
Pension Property	154.9	163.1	...	—
Pension Equity	260.8	274.6	+3.0	—
Pension Intl.	246.0	259.0	+2.3	—
Pension Fxd. Int.	176.0	185.3	+1.1	—
Pension Indx Linked	99 5	104.8	...	—
Pension Cash	147.5	155.3	+0.1	—

Sun Alliance Insurance Group
Sun Alliance House, Horsham 0403 64141

	Series (2)			(1) Bid
Index Linked Fund	107.6	113.3	...	108.1
Equity Fund	281.2	296.0	+0.5	281.5
Fixed Interest Fund	198.0	208.5	+1.1	198.2
Property Fund	213.2	224.5	...	213.5
International Fd.	181.7	191.3	+0.4	181.9
Deposit Fund	143.9	151.5	...	144.2
Managed Fund	234.4	246.8	+0.8	234.6
Int Bond Oct 18				£21.89

Series (2) Prices are for policies issued after 11/7/1982. Series (1) These are bid prices for earlier policies.

Individual Pension Funds

Index Linked	126.7	133.4	...	—
Equity	138.6	145.9	+0.8	—
Fixed Int.	162.3	170.8	+0.9	—
Property	108.7	114.5	...	—
International	152.5	160.6	+0.3	—
Deposit	112.7	118.7	...	—
Managed	145 T	153.4	+0.5	—

Group Pension funds—Prices available on request.

Sun Life of Canada (UK) Ltd.
2, 3, 4, Cockspur St., SW1Y 5BH 01-930 5400

Maple Leaf Plans

Growth Account	431.5	—	...	—
Managed Account	261.7	—	...	—
Equity Account	279 7	—	...	—
Managed Fd. Accum.	125.5	132.1	...	—
Equity Fd. Accum.	127.8	134.5	...	—
Property Fd. Accum.	106.9	112.5	...	—
Fixed Int. Fd. Accum.	122.9	129.4	...	—
Intnl. Fd. Accum	163.7	172.3	...	—
Money Fd. Accum	105.4	110.9	...	—
Index-Ld Sec.Fd Accm.	103.8	109.3	...	—

Barclays Unicorn International
1, Charing Cross, St. Helier, Jersey. 0534 73741

Unidollar Trust	$15.64	16.73	...	1.50
Unibond Trust	$89 34	90.14	...	10.50

1, Thomas St, Douglas, Isle of Man. 0624 23252.

Uni-Australian Tst.	74.3	79.9	...	1.30
Uni-Aust. Mineral Tst.	66.4	71.5	...	1.50
Uni-Pacific Trust	161.1	173.3	...	—
Uni-International Tst	70.2	75 5	...	1.50

Bishopsgate Commodity Ser. Ltd.
P O. Box 42, Douglas, I.o.M. 0624-23911

ARMAC* Oct. 3	$69.01	62.75	...	—
COUNT** Oct. 3	£3.789	4.018	...	1.306
CANRHO*** Oct 3	£2.599	2.756	...	—

Original issue *$10 and **£1. Next sub. October 3.

Bridge Management Ltd.
GPO Box 590, Hong Kong

N'bashi Sept 30	Y43,000	44,100	...	43,006
Nippon Fd Oct 19	$28 73	30.00	...	0.90

Britannia Intl. Investment Mngmt. Ltd.
Box 271, Queensway House, Queen Street, St. Helier, Jersey C.I. 0534-73114

U.S. Dollar Denominated Funds

AmSmallerCos. Fd.	$2.282	2.454	-0.005	—
Dollar Inc Fd.	$0.812	0.869	+0.03	11.00
$ Mngd Curr'cy Fd	$9.72	10 24	+0.06	5 60
First Intnl	$21.25	22.41	...	—
Gold Fund	$0.901	0.995	+0.004	5 30
Normandia In $ Fd	$12.44	13.30	...	—
Universal Gwth Fd	$0 899	0.967	+0.04	—
World of Tech.	$0.845	0.906	+0.01	—

†New dealings Oct. 24

Sterling Denominated Funds

American Invsts	92.3	99 2	...	—
Australian Perf Fd	76.7	82.5	...	—
Far East Fund	97.8	105.2	+1.0	1.00
Jersey Energy Tst	15 4	16 6	-0.3	1.50
Jersey Gilt	22.4	23 8	+0.1	11.70
UK Growth Fund	52.0	55.9	...	3.22
USM Fund	139.5	150.0	+0.07	—

Sterling Deposit Funds

Mngd Currency Fd	£13 05	15.74	+0.02	6 00
Cap Dep Tst	£16.01	16.02	...	0.25

Britannia Fund Managers I.O.M.
1, Thomas Street, Douglas, I.o.M. 0624 4856
Gia Trust (I.O.M.) 100.2 | 105 5 | ... | 10 4
All Jersey Fund's Deal Daily Except **Tuesday (Weekly-Capital) Return 8.00%.

Hambros Fd. Mgrs. (C.I.) Ltd.
P O Box 86, Guernsey. 0481-26521

Capital Reserve Fund	$16 91	16.92	...	0.24
C.I. Fund	323 5	344.5	...	2.32
Special Sits. Fund	122 2	128.74	...	2 18
Sterling Income Fund	111 6	116 4	...	10 31
Dollar Income Fund.	£1 058	1.105	...	12 22
Trans. Nat. Trust.	$1.182	1.245	...	2.41
Intnl Bond.	$109 7	115 52	...	9 35
Int. Equity	$22.16	23.33	...	1 57
Int. Svgs. 'A' $US	$1.67	1 16	...	—
Int Svgs. 'B'	$2.42	2.55	...	—
Galleon Ass. Fund 'A'	$1.123	1.128	...	—
Galleon Ass. Fund 'D'	$1.365	1.387	...	—
Amer Spec Accts.	$1.05	1 11	...	—

Henderson Admin. & Man. (Guernsey)
PO Box 71, St. Peter Port, Guernsey 0481 26541

American (US cents)	177 E	189.1	...	—
Ntrl. Res. (U S cents)	125 4	131 4	...	—
Gilt Fund	£10 48	11 11	+0.09	11.25
Prime Res. Props.	£1.02	1.09	...	—

Henderson Baring Group
1901, Edinburg Tower, Hongkong.

Australia	$9.90	10 67	...	—
Hong Kong.	$8 45	9.07	...	—
Japan Tech.	$26 62	28 44	...	—
Japan Fund	$31.11	39 65	...	—
Malay Sing.	$22.37	24.10	...	—
Pacific Fd.	$14.602	13 332	...	—
Pacific Intl Fd.	$9 47	9 84	...	—
Bond Fd.	$10 E38	11.379	+0.007	11.07

Hill-Samuel & Co. (Guernsey) Ltd.
8 LeFebvre St., St Peter Port, Guernsey, C.I.
Guernsey Tst. 280 7 | 300 3 | +1 3 | 2.69

Hill Samuel Investment Mgmt. Intnl.
P O Box 63, Jersey. 0534 16029

UK Equities (C I. Fd.)	186 1	199 8	...	2.5
UK Gilt (Jy. Fxd. Int.)	104.0	110 0	...	11 0
Int. Man. (Growth Fd.)	168 1	180 0	...	—

Int. Currency Fund

D Mark.	DM2.69	—	+0.01	—
£ Sterling		£11.30	+0.01	—
Swiss Franc		SF35 99	...	—
U S. $	$22 54	—	+0.02	—
Managed Fund	£12 08	12.69	+0.01	—

Box 2622, Berne, Switzerland. Telex 33425.

H S. Overseas Fd	$29 58	31 06	+0.20	—
Balanced (CSF Fund)	SF32.16	23 77	-0.01	—
Far East (Crossbow)	SF7.64	£.18	+0.11	—
Technology (ITF Fd)	$16.43	17 85	+0.11	—

HK Fund Managers (Jersey) Ltd.
Queens Hse, Don Rd, St Helier, C.I. 0534 71460

HK Gilt Fund Acc.	1.20	1.25	...	—
HK Gilt Fund (Dist)	1 03	1 07	...	10 51

I.C. Trust Managers Ltd.
10, St. Georges St., Douglas, IoM 0624 25015

Richmond Life Ass. Ltd.
4 Hill Street, Douglas, IoM. 0624 23914

Com Trust	29 6	30 8	...	—
Diamond Bond	68 1	72.9	...	—
Gold Bond	242 2	257.5	+1.9	—
Sterling Deposit Bd	170 59	174 56	+0.03	9 09
UK Gilt Fund.	163 8	174 1	+1.4	—

Rothschild Asset Management (C.I.)
St Julian's Ct, St Peter Pt, Guernsey 0481 26741

OC America Fd.*	$3.69	3 92	-0 18	1 11
OC Sm Co**	183 4	191 9	...	1 41
OC Commodity†	119 9	127 0	...	2 24
OC $ Comdty*	$37 34	39 15	...	1 71
OC Hongkg†‡	HK27 25	28 58	...	—

*Prices Oct. 21 Next dlng Nov 7 †Prices Oct. 14. Next dlng Oct 31 ***Prices Oct 1d Next dlng Oct 31

††Dealings every Wednesday.

OC Intl Reserves Ltd. 0481 26741-26331
See adjacent Page Mon-Fri and Stock Exchange Dealings Page Sat.

Rothschild Australia Asset Mgt Ltd.
11 Bridge St, Sydney 2000, Australia
Five Arrows Aust Eq. A$1 41 | 1.45 | | 6 4

Royal Bank of Canada Funds
RBC Invest Managers Ltd
PO Box 246, St Peter Port, Guernsey 0481 23021

Intl Income Fd.	$10 07	10 71	...	—
Intl Capital Fd.	$14 93	16.??	+0 12	—
North America Fd	$6 74	7.35	...	—

RBC Intl Currencies Fd Ltd

U S $		$21.49	+0.02	—
Canadian $		C$25 80	+0.01	—
£ Sterling		£10 83	+0.01	—
D-Mark		DM51 79	+0.01	—
Swiss Francs		SF40 43	+0.01	—
Japanese Yen.		Y6,356	+2	—
Managed Fund		20 92	+0.01	—

Daily Dealings

Royal Trust Intnl. Fd. Mngt. Ltd
PO Box 194, St Helier, Jersey 0534 27441

Sterling Fxd Int Fd	0 824	0 873	...	10 32
International Secs	$1 078	1.160	...	1 31
International Bond	$0 861	0 913	...	10 53

Prices on Oct 19 Next dealing Oct 26.

SCI/Tech S.A.
2 Boulevard Royal, Luxembourg.
SCI/Tech Nav $10 15 | — | +0.001 | —

Save & Prosper International
Dealing to
P O Box 13, St. Helier, Jersey 0534 73933

Fixed Interest Funds

Deutschmark Bd.**	DM10 11	10 72	...	5 13
Dlr. Fxd Int **	$9 10	4 78	...	4 00
St. Fixed‡	116.5	123.2	...	11 36
Yen Bond**	Y1,371	1,445	...	3 11

Equity Funds

OFFSHORE AND OVERSEAS

NOTES

FT LONDON SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

Interest Due	Stock	Price £	Last xd	Yield Int.	Yield Red.
22May 22N	Exch. 13½pc '83	100⅛xd	11.4	—	—
12Jan 12D	Exch. 10pc 1983	100⅛	6.5	9.99	9.34
15Jul 15Ja	Funding 5½pc '82-84‡‡	99⅛	8.6	5.55	9.31
20Aug 20F	Exch. 11¼pc 1984	100 11/16	14.1	11.17	8.76
22N 22May	Exchequer 14pc 1984	102⅝xd	15.4	13.64	9.34
19D 19Jan	Exch. 3pc 1984	96⅛	13.5	3.12	5.17
26Mar 26S	Treasury 12pc 1984	102 1/16	22.8	11.74	9.43
22Aug 22F	Treasury 15pc 1985	105¾	18.7	14.18	10.16
22S 22Mar	Exch. 12pc Cnv. '85	102½	16.8	11.71	10.04
21N 21My	Treasury 3pc 1985	92⅞xd	14.4	3.23	8.05
15Jan 15Jul	Treasury 11½pc 1985	101⅞	8.6	11.28	10.22
3 Mar 3 Sept	Treas 8¾pcCnv '85	98	28.7	0.92	9.91
22May 22N	Exch. 12¼pc 1985	103⅝	15.4	11.87	10.56
25 Aug. 25F	Exch. 11¾pc '86	102 1/16	19.7	11.51	10.87
—	Treas 10pc Cnv 1986	99 11/16	—	10.03	10.13
19N 19May	Treasury 3pc 1986	87⅝xd	13.10	3.41	8.39
19 Nv 19 My	Exch. 10½pc Cv '86	100xd	13.10	10.50	10.53
12D 12Jun	Treasury 12pc '86	102½	4.5	11.70	10.84
10Ja 10Jul	Treasury 8½pc '84-86‡‡	95½	3.6	0.91	10.46
14 Jan 14 Jy	Treas. 12¾pc '86 Cnv.	107½	7.6	11.39	9.03
29Apr 29Oct	Exch. 14pc 1986	107 ¼xd	22.9	13.00	10.93
22Jul 22Jan	Exch. 13¾pc 1987	105¾	15.6	12.52	11.05
10 Fb 10 Ag	Tr 10¼pc Cv '87	98⅜	—	10.41	10.81
24 Fb 24 Aug	Exchequer 2½pc 1987	82¾	18.7	3.02	8.54
Oct 6 Apr 6	Exch. 10½pc 1987	98 11/16	1.9	10.62	10.91
1N 1May	Funding 6½pc '85-87‡‡	89⅞xd	26.9	7.23	9.99
—	Treas. 10pc '87 (£60pd)	60⅛	—	10.27	10.87
14Ja 14Jul	Treasury 3pc 1987	81⅝	7.6	3.67	8.89
3 May 3N	Treas 12pc 1987	109 1/16xd	27.9	11.64	11.03
26Jul 26Ja	Treasury 7¾pc '85-88‡‡	90½	20.6	8.56	10.55
10 My 10 Nv	Exch 10½pc '88	98 7/16xd	4.10	10.66	11.96
—	Treas 9¾pcCv88(£30pd)‡	29½	—	10.13	10.78
1Ja 1Jul	Transport 3pc '78-88	77⅞	25.5	3.85	0.86

Five to Fifteen Years

Interest Due	Stock	Price £	Last xd	Yield Int.	Yield Red.
25Ap. 25Oct.	Treas. 9½pc '88	94½xd	19.9	10.06	10.98
22Aug. 22F	Treasury 11½pc 1989	103½	18.7	11.33	11.09
14 Dc 14 Jn	Treas 10½pc 1989	102	—	10.78	13.11
15Ap 15Oct	Treasury 5pc '86-89	79⅜	8.9	6.28	9.55
15Jul. 15Ja.	Treasury 13pc 1990‡‡	113⅝	8.6	12.06	11.20
22Sept 22Mar	Exch. 12½pc 1990	106¾	16.8	11.83	11.23
13O 15Jun	Treasury 8¼pc '87-90‡‡	91¾	5.5	9.29	10.63
10Jul 10Ja	Treasury 13¾pc 1991	105½	16	11.51	11.29
5Oct. 5Ap.	Funding 5¾pc '87-91‡‡	78⅝	1.9	7.32	4.88
25Ap. 25Oct.	Exch. 11pc 1991	99½xd	19.9	13.03	11.09
22Jul. 22Ja.	Treasury 12¾pc '92‡‡	111¼	15.6	11.81	11.22
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Over Fifteen Years

[illegible]

Undated

[illegible]

Index-Linked

[illegible]

Prospective real redemption rate on projected inflation of (1) 10% and (2) 7%.

INT. BANK AND O'SEAS GOVT. STERLING ISSUES

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH AND AFRICAN LOANS

[illegible]

LOANS

Public Board and Ind.

[illegible]

LOANS—continued

Financial

[illegible]

Building Societies

[illegible]

FOREIGN BONDS & RAILS

[illegible]

AMERICANS

[illegible]

CANADIANS

[illegible]

BANKS, H.P. & LEASING

[illegible]

BANKS—Continued

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING INDUSTRY, TIMBER AND ROADS

[illegible]

CHEMICALS, PLASTICS

[illegible]

CHEMICALS, PLASTICS—Cont.

[illegible]

DRAPERY AND STORES

[illegible]

ELECTRICALS

[illegible]

ELECTRICALS—Continued

[illegible]

ENGINEERING

[illegible]

FOOD, GROCERIES, ETC.

[illegible]

FOOD, GROCERIES—Cont.

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS—Continued

[illegible]

INSURANCES

[illegible]

LEISURE

[illegible]

LEISURE—Continued

[illegible]

MOTORS, AIRCRAFT TRADES

Motors and Cycles

[illegible]

Commercial Vehicles

[illegible]

Components

[illegible]

Garages and Distributors

[illegible]

NEWSPAPERS, PUBLISHERS

[illegible]

PAPER, PRINTING ADVERTISING

[illegible]

PROPERTY

[illegible]

PROPERTY—Continued

[illegible]

SHIPPING

[illegible]

SHOES AND LEATHER

[illegible]

SOUTH AFRICANS

[illegible]

TEXTILES

[illegible]

TOBACCOS

[illegible]

TRUSTS, FINANCE, LAND

Investment Trusts

[illegible]

INVESTMENT TRUSTS—Cont.

[illegible]

Finance, Land, etc.

[illegible]

OIL AND GAS

[illegible]

OIL AND GAS—Continued

[illegible]

OVERSEAS TRADERS

[illegible]

PLANTATIONS

Rubbers, Palm Oil

[illegible]

Teas

[illegible]

MINES

Central Rand

[illegible]

Eastern Rand

[illegible]

Far West Rand

[illegible]

O.F.S.

[illegible]

Finance

[illegible]

Diamond and Platinum

[illegible]

Central African

[illegible]

MINES—continued

Australians

[illegible]

Tins

[illegible]

Miscellaneous

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
—		Admiral Mines	42	—	—	—	—
—		♥Anglo-Dominion	80	—	—	—	—
—		♥Anglo Utd. Dev.	67	—	—	—	—
—		♥Colby Res Corp.	140	—	—	—	—
Aug.	Feb.	Cons. Murch. 10c.	435	4.7	‡060c	1.9	‡
Sept-Feb		Hampton Areas 10p	208	18.7	3.75	2.1	2.4
—		♥Highwood Res	180	—	—	—	—
—		Homestake Mining $1	£18	3.8	020c	—	0.7
—		Northgate C$1	305	9/77	—	—	—
Jan.	July	R.T.Z.	575	9.5	‡17.0	2.9	4.3
Jan.	July	[illegible]	£127	9.5	Q9½%	32.5	‡7.7
—		♥Sabina Inds C$1	75	—	—	—	—
		For Southwest Res see Oil & Gas					
—		♥Tara Explor $1	635	—	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap" Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Principal and interest tax-free to non-residents on application.
- ◆ Figures or report awaited.
- ♥ Not officially UK Listed; dealings permitted under Rule 163(4)(a).
- ◆ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Dealt in under Rule 163(3).
- # Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- ◆ Merger bid or reorganisation in progress.
- ◆ Not comparable.
- ◆ Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ‖ No par value.

B.Fr. Belgian Francs. Fr. French Francs. ## Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. D Issue price. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1983-84. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1984. K Figures based on prospectus or other official estimates for 1982-83. M Dividend and yield based on prospectus or other official estimates for 1983. N Dividend and yield based on prospectus or other official estimates for 1982-83. P Figures based on prospectus or other official estimates for 1982. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL AND IRISH STOCKS

The following is a selection of regional and Irish stocks, the latter being quoted in Irish currency.

Albany Inv. 20p	62	.....	Fin. 13% 97/02	£95⅝	+⅛
Bdg'wtr. Est. 50p	290	.....	Alliance Gas	75	−3
Craig & Rose £1	£10½	.....	Arnott	285	.....
Finlay Pkg. 5p	36	−1	Carroll (P.J.)	100	−2
Higsons Brew	85	.....	Concrete Prods.	75	.....
Holt (Jos) 25p	900	.....	Hnlton (Hldgs.)	14	.....
I.O.M. Stm. £1	130	.....	Irish Ropes	34	.....
IRISH			Jacob	81	.....
Exch. 12% 1985	£98¾	.....	T.M.G.	85	.....
Nat. 9¾% 84/89	£88⅝	+⅛	Unidare	74	.....

For Craig see Shipping

For Pearce (C. H.) see Buildings

OPTIONS

3-month Call Rates

[illegible]

"Recent Issues" and "Rights" Page 18

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £700 per annum for each security

CURRENCIES, MONEY and CAPITAL MARKETS

FINANCIAL FUTURES

LONDON

THREE-MONTH EURODOLLAR
$1m points of 100%

	Close	High	Low	Prev
Dec	90.45	90.45	90.39	90.44
March	90.09	90.09	90.05	90.09
June	89.82	89.82	89.77	89.80
Sept	89.51	—	—	89.54
Dec	89.29	—	—	89.31

Volume 1,312 (1,786)
Previous day's open int. 7,537 (7,438)

THREE-MONTH STERLING DEPOSIT
£250,000 points of 100%

	Close	High	Low	Prev
Dec	90.73	90.75	90.68	90.69
March	90.48	90.48	90.39	90.40
June	90.19	90.19	90.14	90.14
Sept	89.88	89.90	89.86	89.85
Dec	89.53	—	—	89.50

Volume 676 (257)
Previous day's open int. 5,348 (5,284)

20-YEAR 12% NOTIONAL GILT
£50,000 32nds of 100%

	Close	High	Low	Prev
Dec	107-25	107-28	107-05	106-27
March	107-08	—	—	106-11
June	106-26	—	—	105-28
Sept	106-12	—	—	105-14
Dec	105-30	—	—	105-00

Volume 4,059 (3,208)
Previous day's open int. 2,666 (2,846)
Basis quote (clean cash price of 13¼% Treasury 2003 less equivalent price of near futures contract) 8 to 18 (32nds).

STERLING £25,000 $ per £

	Close	High	Low	Prev
Dec	1.5025	1.5030	1.5003	1.4998
March	1.5035	1.5035	1.5032	1.5010
June	1.5047	1.5047	1.5047	1.5023

Volume 461 (740)
Previous day's open int. 1,259 (1,258)

DEUTSCHE MARKS DM 125,000 $ per DM

	Close	High	Low	Prev
Dec	0.3894	0.3897	0.3893	0.3885
March	0.3930	—	—	0.3918
June	0.3963	—	—	0.3951

Volume 29 (32)
Previous day's open int. 361 (367)

SWISS FRANCS SwFr 125,000 $ per SwFr

	Close	High	Low	Prev
Dec	0.4800	0.4805	0.4800	0.4788
March	0.4858	—	—	0.4846
June	0.4920	—	—	0.4908

Volume 12 (10)
Previous day's open int. 112 (116)

JAPANESE YEN Y12.5m $ per Y100

	Close	High	Low	Prev
Dec	0.4320	0.4335	0.4319	0.4319
March	0.4355	—	—	0.4352
June	0.4390	—	—	0.4387

Volume 62 (15)
Previous day's open int. 153 (158)

U.S. TREASURY BONDS (CBT)
8% $100,000 32nds of 100%

	Close	High	Low	Prev
Dec	72-18	72-23	72-03	72-08
March	71-30	72-02	71-15	71-20
June	71-14	71-17	71-00	71-03
Sept	71-00	71-02	70-17	70-21
Dec	70-20	70-22	70-09	70-09
March	70-10	70-12	70-08	69-31
June	70-02	70-04	70-00	69-26
Sept	69-27	—	—	—
Dec	—	—	—	—
March	—	—	—	—
June	—	—	—	—

U.S. TREASURY BILLS (IMM)
$1m points of 100%

	Close	High	Low	Prev
Dec	91.25	91.30	91.23	91.27
March	90.86	90.90	90.83	90.86
June	90.56	90.62	90.54	90.57
Sept	90.31	90.36	90.31	90.31
Dec	90.09	90.19	90.09	90.08
March	89.88	89.89	89.88	89.88
June	89.68	89.70	89.68	89.68
Sept	89.52	89.53	89.52	89.52

CERT. DEPOSIT (IMM) $1m points of 100%

	Close	High	Low	Prev
Dec	90.58	90.63	90.56	90.60
March	90.14	90.18	90.13	90.19
June	89.81	89.85	89.81	89.91
Sept	89.54	89.56	89.54	89.54
Dec	—	—	—	—
March	—	—	—	—

THREE-MONTH EURODOLLAR (IMM)
$1m points of 100%

	Close	High	Low	Prev
Dec	90.15	90.19	90.12	90.16
March	89.77	89.82	89.76	89.78
June	89.46	89.52	89.46	89.47
Sept	89.21	89.25	89.20	89.21
Dec	88.98	88.99	88.97	88.98
March	88.77	—	88.76	88.77

STERLING (IMM) $ per £

	Close	High	Low	Prev
Dec	1.5030	1.5046	1.5015	1.4995
March	1.5045	1.5050	1.5025	1.5010
June	1.5060	1.5060	1.5040	1.5020
Sept	1.5070	1.5070	1.5040	1.5030
Dec	—	—	—	—
March	—	—	—	—

GNMA (CBT) 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Dec	69-08	69-13	68-29	69-00
March	68-09	68-13	68-01	68-01
June	67-14	67-17	67-06	67-06
Sept	66-25	66-27	66-17	66-17
Dec	66-08	66-08	66-00	66-00
March	—	—	—	—
June	65-14	—	—	65-06
Sept	65-04	—	—	64-28
Dec	—	—	—	—
March	—	—	—	—
June	—	—	—	—
Sept	—	—	—	—

WEEKLY CHANGE IN WORLD INTEREST RATES

	Oct. 21	change		Oct. 21	change
LONDON			**NEW YORK**		
Base rates	9	Unch'd	Prime rates	11	Unch'd
7 day interbank	9 1/8	+ 1/8	Federal funds	9 1/2	+ 1/4
3 mth interbank	9 3/8	Unch'd	3 Mth. Treasury Bills	8.50	−0.26
Treasury Bill Tender	8.8398	−0.0184	6 Mth. Treasury Bills	8.70	−0.24
Band 1 Bills	9 1/16	Unch'd	3 Mth. CD	9.20	−0.05
Band 2 Bills	9	Unch'd	**FRANKFURT**		
Band 3 Bills	8 15/16	Unch'd	Lombard	5.50	Unch'd
3 Mth. Treasury Bills	8 7/8	Unch'd	One Mth. Interbank	5.80	Unch'd
1 Mth. Bank Bills	9 1/32	Unch'd	Three month	6.15	−0.05
3 Mth. Bank Bills	8 15/16	+ 1/32	**PARIS**		
TOKYO			Intervention Rate	12.25	Unch'd
One month Bills	6.65625	−0.0625	One Mth. Interbank	12.375	−0.0625
Three month Bills	6.84375	Unch'd	Three month	12.5625	+0.0625
BRUSSELS			**MILAN**		
One month	8 7/8	+ 1/8	One month	17 1/2	Unch'd
Three month	9 1/4	− 1/8	Three month	17 1/2	Unch'd
AMSTERDAM			**DUBLIN**		
One month	5 3/4	− 1/4	One month	12 3/8	Unch'd
Three month	6 1/8	− 1/8	Three month	12 5/8	Unch'd

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, and band 3 bills 34 to 63 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week. Band 4 bills 8 7/8.

FOREIGN EXCHANGES

A weaker yen may be resisted

Friday's announcement of a ½ per cent cut to 5 per cent in the Japanese discount rate must be viewed against the background of the yen's performance on the foreign exchanges this year. Only against the dollar is the yen little changed from the beginning of the year, while in terms of European currencies it has shown a fairly persistent improvement. The strengthening dollar has tended to mask the yen's steady climb for most of the year, until better U.S. money supply figures and the prospect of lower interest rates, led to a downturn by the dollar about a month ago. It touched a peak of Y246.90 in mid-August, but is now around the Y233 level, compared with Y230 in January.

The pattern against the D-mark, and therefore the other members of the European Monetary System, is rather different however, with the German currency starting the year at Y97, and just about crossing the Y100 barrier in March, before sliding steadily to less than Y90 this month.

Sterling has been more volatile, as might be expected because of its petrocurrency status. Britain's position as an oil exporter contrasts strongly with Japan's need to import virtually all its substantial energy requirements, and means that the pressures of the oil market work in opposite directions for the pound and yen. Sterling was around Y370 in January, and touched a high of Y384 on June 1, but has since fallen back to under the Y350 mark.

The yen has been outperforming European currencies nearly all year, gaining substantial support from the attractions of the Tokyo stock exchange, at a time when Japan's economy was still very strong when compared with its competitors. The package of economic measures announced at about the same time as the discount rate cut is intended to boost the domestic economy and help the Government achieve its growth target of 3.4 per cent for the current financial year.

Stimulating export-led growth would obviously run the risk of incurring the wrath of other Government with France obviously hostile to more imports from Japan, and Japanese motor cycles already the subject of tough restrictions in the U.S. Any signs of a weaker yen are therefore likely to be resisted by the Japanese authorities.

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU October 21	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	44.9008	45.9454	+2.23	+1.93	±1.5447
Danish Krone	8.14104	8.15646	+0.19	−0.21	±1.6425
German D-Mark	2.24184	2.25000	+0.33	−0.04	±1.0642
French Franc	6.87456	6.87809	+0.05	−0.35	±1.4052
Dutch Guilder	2.52595	2.53146	+0.22	−0.18	±1.4964
Irish Punt	0.72569	0.725180	+0.07	−0.33	±1.6699
Italian Lira	1403.49	1370.74	−2.33	−2.33	±4.1505

Changes are for ECU, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

OTHER CURRENCIES

Oct. 21	£	$		£ Note Rates
Argentina Peso	22.23-22.30	14.82-14.85	Austria	27.19-27.45
Australia Dollar	1.6205-1.6318	1.0850-1.0855	Belgium	80.00-80.80
Brazil Cruzeiro	1,198.5-1,205.7	799.0-803.0	Denmark	14.00-14.14
Finland Markka	8.4400-8.460	5.6220-5.6240	France	11.80-11.92
Greek Drachma	138.83-139.4	92.50-92.80	Germany	3.85½-3.89½
Hong Kong Dollar	11.68½-11.70½	7.785-7.795	Italy	2345-2375
Iran Rial	129.60*	86.60*	Japan	348-352
Kuwait Dinar (KD)	0.4350-0.43545	0.2897-0.2898	Netherlands	4.34½-4.38½
Luxembourg Fr.	79.19-79.22	52.71-52.73	Norway	10.90-11.00
Malaysia Dollar	3.5150-3.5250	2.3415-2.3435	Portugal	185-212
New Zealand Dlr.	2.2580-2.2630	1.5035-1.5060	Spain	219½-234½
Saudi Arab. Riyal	5.2250-5.2290	3.4799-3.4802	Sweden	11.60-11.70
Singapore Dollar	3.20-3.21	2.1310-2.1330	Switzerland	3.14½-3.17½
Sth. African Rand	1.6935-1.6955	1.1275-1.1290	United States	1.49-1.51
U.A.E. Dirham	5.5135-5.5185	3.6720-3.6730	Yugoslavia	194-211

* Selling rates.
Oct 20: The rate for the Cruzeiro should have read 1,197.55-1,204.20, the rate for the New Zealand $ should have read 2.2580-2.2610.

THE POUND SPOT AND FORWARD

Oct 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.4980-1.5030	1.5015-1.5025	0.02-0.07c dis	−0.35	0.13-0.18dis	−0.41
Canada	1.8450-1.8500	1.8485-1.8495	0.03c pm-0.07dis	−0.13	par-0.10dis	−0.11
Nethlnd.	4.34½-4.37½	4.35½-4.36½	1¼-1c pm	3.44	3¼-3⅛ pm	2.09
Belgium	78.90-79.30	79.12-79.22	6c pm-4 dis	9.15	par-10 dis	−0.25
Denmark	14.04-14.10	14.06-14.07	1.40-2.45ore dis	−1.64	4.75-5.80dis	−1.51
Ireland	1.2500-1.2560	1.2520-1.2530	0.30-0.40p dis	−3.35	0.95-1.08dis	−3.13
W. Ger.	3.86½-3.89	3.87½-3.88½	1½-1pf pm	3.88	3½-3¼ pm	3.48
Portugal	185.00-186.00	185.40-185.90	200-445c dis	−20.84	890-1300dis	−21.44
Spain	225.50-226.25	225.65-225.95	185-300c dis	−12.89	780-875dis	−14.66
Italy	2358-2370	2360-2362	16-18 lire dis	−8.64	50-53 dis	−8.72
Norway	10.93-10.97	10.94¼-10.95¼	2.90-3.60ore dis	−3.56	9.95-10.70dis	−3.77
France	11.82½-11.87	11.84½-11.85½	2½-3½c dis	−3.29	12½-14½dis	−4.56
Sweden	11.62-11.67	11.64-11.65	2.70-3.25ore dis	−3.06	7.55-8.45dis	−2.75
Japan	347-351	348½-349½	0.85-0.76y pm	2.78	2.47-2.32 pm	2.74
Austria	27.20-27.35	27.26-27.31	8-6½gro pm	3.22	21½-16 pm	2.77
Switz.	3.14-3.16½	3.15-3.16	1⅝-1⅜c pm	5.23	4½-3¾ pm	4.91

Belgian rate is for convertible francs. Financial franc 80.40-80.50. Six-month forward dollar 0.21-0.26c dis, 12-month 0.45-0.55c dis.

FORWARD RATES AGAINST STERLING

	Spot	1 month	3 months	6 months	12 months
Dollar	1.5020	[illegible]	[illegible]	[illegible]	[illegible]
D-Mark	3.88	[illegible]	[illegible]	[illegible]	[illegible]
French Franc	11.85	[illegible]	[illegible]	[illegible]	[illegible]
Swiss Franc	3.1550	[illegible]	[illegible]	[illegible]	[illegible]
Japanese Yen	349.25	[illegible]	[illegible]	[illegible]	[illegible]

BANK OF ENGLAND TREASURY BILL TENDER

	Oct. 21	Oct. 14		Oct. 21	Oct. 14
Bills on offer	£100m	£100m	Top accepted rate of discount	[illegible]	[illegible]
Total of applications	£414.3m	£583.9	Average rate of discount	[illegible]	[illegible]
Total allocated	£100m	£100m	Average yield	[illegible]	[illegible]
Minimum accepted bid	£97.79	£97.79	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	51	33%			

CURRENCY MOVEMENTS

Oct. 21	Bank of England Index	Morgan Guaranty Changes %
Sterling	83.5	−8.0
U.S. dollar	125.6	+14.6
Canadian dollar	91.2	+1.0
Austrian schilling	118.1	+3.9
Belgian franc	90.8	−11.8
Danish kroner	81.7	−5.8
Deutsche mark	127.7	+8.4
Swiss franc	143.7	+13.9
Guilder	116.9	+4.9
French franc	72.0	−14.9
Lira	48.0	−11.4
Yen	152.6	+10.6

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (base average 1975=100).

CURRENCY RATES

Oct. 20	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	[illegible]	[illegible]	[illegible]
U.S. $	[illegible]	[illegible]	[illegible]
Canadian $	[illegible]	[illegible]	[illegible]
Austria Sch	[illegible]	[illegible]	[illegible]
Belgian Fr	[illegible]	[illegible]	[illegible]
Danish Kr	[illegible]	[illegible]	[illegible]
D mark	[illegible]	[illegible]	[illegible]
Guilder	[illegible]	[illegible]	[illegible]
French Fr	[illegible]	[illegible]	[illegible]
Lira	[illegible]	[illegible]	[illegible]
Yen	[illegible]	[illegible]	[illegible]
Norwgn Kr	[illegible]	[illegible]	[illegible]
Spanish Pta	[illegible]	[illegible]	[illegible]
Swedish Kr	[illegible]	[illegible]	[illegible]
Swiss Fr	[illegible]	[illegible]	[illegible]
Greek Drch	[illegible]	[illegible]	[illegible]

*CS/SDR rate for Oct 20: 1.30[illegible]

THE DOLLAR SPOT AND FORWARD

Oct 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.4980-1.5030	1.5015-1.5025	0.02-0.07c dis	[illegible]	[illegible]	[illegible]
Ireland†	1.1986-1.2010	1.1985-1.1995	[illegible]	[illegible]	[illegible]	[illegible]
Canada	1.2306-1.2316	1.2310-1.2315	[illegible]	[illegible]	[illegible]	[illegible]
Nethlnd.	2.9015-2.9060	2.9030-2.9050	[illegible]	[illegible]	[illegible]	[illegible]
Belgium	52.62-52.75	52.71-52.73	[illegible]	[illegible]	[illegible]	[illegible]
Denmark	9.3550-9.3650	9.3575-9.3625	[illegible]	[illegible]	[illegible]	[illegible]
W. Ger.	2.5775-2.5800	2.5820-2.5830	[illegible]	[illegible]	[illegible]	[illegible]
Portugal	123.40-123.76	123.40-123.70	130-280c dis	[illegible]	[illegible]	[illegible]
Spain	150.25-150.80	150.25-150.35	120-200c dis	[illegible]	[illegible]	[illegible]
Italy	1572-1574	1572-1573	10.30-10.80lire dis	[illegible]	[illegible]	[illegible]
Norway	7.2900-7.3100	7.3025-7.3075	1.80-2.10ore dis	[illegible]	[illegible]	[illegible]
France	7.8800-7.9100	7.8900-7.8950	1.90-2.10c dis	[illegible]	[illegible]	[illegible]
Sweden	7.7500-7.7630	7.7525-7.7575	1.65-1.90ore dis	[illegible]	[illegible]	[illegible]
Japan	231.50-233.00	232.30-232.40	0.67-0.57y pm	3.30	[illegible]	[illegible]
Austria	18.14-18.17	18.14-18.16	6.60-6.20gro pm	[illegible]	[illegible]	[illegible]
Switz	2.0980-2.1060	2.0990-2.1000	1.00-0.95c pm	[illegible]	[illegible]	[illegible]

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 53.54-53.57.

EXCHANGE CROSS RATES

Oct. 21	Pound St'rling	U.S. Dollar	Deutschem'k	Japanese Yen	French Franc	Swiss Franc	Dutch Guild	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	1.502	3.880	349.3	11.85	3.155	4.363	2361.	1.848	79.17
U.S. Dollar	0.666	1.	2.583	232.5	7.889	2.101	2.904	1572.	1.231	52.71
Deutschemark	0.258	0.387	1.	90.01	3.054	0.813	1.124	608.9	0.477	20.40
Japanese Yen 1,000	2.863	4.301	11.11	1000.	33.93	9.034	12.49	6760.	5.294	226.7
French Franc 10	0.844	1.268	3.274	294.7	10.	2.662	3.681	1992.	1.560	66.81
Swiss Franc	0.317	0.476	1.230	110.7	3.756	1.	1.383	748.3	0.586	25.09
Dutch Guilder	0.229	0.344	0.889	80.06	2.716	0.723	1.	541.2	0.424	18.15
Italian Lira 1,000	0.424	0.636	1.643	147.9	5.019	1.336	1.848	1000.	0.783	33.53
Canadian Dollar	0.541	0.812	2.098	188.9	6.409	1.706	2.359	1277.	1.	42.82
Belgian Franc 100	1.263	1.897	4.901	441.1	14.97	3.985	5.510	2982.	2.336	100.

MONEY MARKETS

Lacking inspiration

Anyone looking for inspiration about the future direction of interest rates is likely to be disappointed, because at the moment several factors are pulling in opposite directions. In these circumstances movements in wholesale money market rates have virtually come to a halt, and are unlikely to gain any impetus until a new factor comes to the fore.

News from the U.S. continues to dominate a very uncertain market, with the recent improvement in M1 money supply set against fears that the growing economic recovery will lead to overheating, and the continuing need to finance a large budget deficit. The Treasury is to announce another refunding package this week, while last week some rather confusing figures were published about the U.S. economy.

Housing starts for September were below expectations, but the rise of 7.9 per cent in third quarter Gross National Product was above the earlier flash estimate of 7 per cent, and may limit the Federal Reserve's room to change its monetary stance if it is the harbinger of growing inflationary pressure.

On the other hand money supply growth within the Fed's targets continues to encourage hopes of lower interest rates, and was a factor behind the eventual weakening of the dollar last week.

Sterling interbank interest rates refused to react to any news, including foreign exchange rumours of another cut in London clearing bank base rates. Most traders seemed to believe that the 9 per cent base rate is here to stay for some time, and were equally unimpressed by technical fluctuations in the U.S. Federal funds overnight rate or indications of high U.K. Government expenditure in the Public Sector Borrowing Requirement figures.

LONDON MONEY RATES

Oct. 21 1983	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount Market Deposits	Treasury Bills ◆	Eligible Bank Bills ◆	Fine Trade Bills ◆
Overnight	—	7-9½	9-9¼	—	—	9⅛-9½	7-9¼	—	—	—
2 days notice	—	—	9-9⅛	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	9⅛	—	—	—	—
7 days notice	—	9⅛-9¼	9-9¼	—	—	—	9-9⅛	—	—	—
One month	9⅛-9	9⅛-9¼	9⅛-9¼	9⅜-9⅛	9¼	9⅛-9⅜	9	8⅞	9⅛	[illegible]
Two months	9⅛-9	9¼-9⅛	9⅛-9⅜	9⅜-9⅛	9¼	9¼	9	8⅞	9	[illegible]
Three months	9⅛-9	9⅛-9⅜	9⅛-9⅜	9⅜-9⅛	9⅜	9⅜	9	8⅞	8⅞	[illegible]
Six months	9⅛-9	9⅛-9¼	9⅜-9⅛	9½-9¼	9⅜	—	—	—	8⅞	[illegible]
Nine months	9⅛-9⅛	9⅜-9⅜	9⅝	10-9⅝	9¾	—	—	—	—	[illegible]
One year	9½-9⅛	9⅛-9⅞	9⅝-9¾	10-9¾	9⅞	—	—	—	—	[illegible]
Two years	—	—	10⅛	—	—	—	—	—	—	[illegible]

ECGD Fixed Rate Export Scheme IV. Average Rate for interest period September 7 to October 4, 1983 (inclusive) 8.719 per cent.

Local authorities and finance houses seven days' notice, others seven days fixed. Long-term local authority mortgage rates nominally three years 10¾ per cent; four years 10⅞-11 per cent; five years 11-11⅛ per cent. ◆ Bank bill rates in table are buying rates for prime paper. Buying rates for four months' bank bills 8[illegible] per cent; four months trade bills 9[illegible] per cent.

Approximate selling for one-month Treasury bills 8 per cent. Approximate selling rate for one-month bank bills [illegible] per cent; two months 8[illegible] per cent and three months 8[illegible]-9 per cent; two months 8[illegible] per cent; and three months 8[illegible] per cent: trade bills 9[illegible] per cent; two months 9[illegible] per cent and three months 9[illegible] per cent.

Finance House Base Rate (published by the Finance Houses Association): 10 per cent from October 1, 1983. London and Scottish Clearing Bank Rates for lending: 9 per cent. London Deposit Rates for sums at seven days' notice [illegible] per cent.

Treasury Bills: Average tender rates of discount 8.8398 per cent. Certificates of Tax Deposit (Series 9): Deposits of £100,000 and over held under one month 9½ per cent; one-three months 9¼ per cent; three-six months 9¼ per cent; six-12 months 10 per cent. Under £100,000 9¼ per cent from October 8. Deposits held under Series 4-8 10 per cent. The rate for all deposits withdrawn for cash 8 per cent.

INTEREST RATES

MONEY RATES

NEW YORK

Prime rate	11
Fed funds (lunch-time)	9¼-9½
Treasury bills (13-week)	8.50
Treasury bills (26-week)	8.70

GERMANY

Lombard	5.5
Overnight rate	5.50
One month	5.80
Three months	6.15
Six months	9.15

FRANCE

Intervention rate	12.25
Overnight rate	12.125
One month	12.375
Three months	12.375
Six months	12.5625

JAPAN

Discount rate	5
Call (unconditional)	6.53125
Bill discount (3-month)	6.84375

SWITZERLAND

Discount rate	4
Overnight rate	1½-2½
One month	3¾-4
Three months	4⅛-4⅜

NETHERLANDS

Discount rate	5
Overnight rate	5⅜-5⅞
One month	5¾-5⅞
Three months	6-6⅛
Six months	6-6⅛

$ CERTIFICATES OF DEPOSIT

One month	9.25-9.35
Three months	9.30-9.40
Six months	9.46-9.56
One year	9.65-9.85

LONG TERM EURO $

Two years	10⅞-11
Three years	11-11⅛
Four years	11½-11⅝
Five years	11⅞-12

SDR LINKED DEPOSITS

One month	8[illegible]-8[illegible]
Three months	8[illegible]-9[illegible]
Six months	9[illegible]-9[illegible]
One year	9[illegible]-9[illegible]

ECU LINKED DEPOSITS

One month	9[illegible]-9[illegible]
Three months	9[illegible]-9[illegible]
Six months	9[illegible]-9[illegible]
One year	9[illegible]-10[illegible]

EURO-CURRENCY INTEREST RATES

(Market closing rates)

Oct. 20	Short term	7 days notice	Month	Three Months	Six Months	One Year
Sterling	9-9⅛	9-9¼	9⅛-9¼	9¼-9⅜	9⅜-9½	[illegible]
U.S. Dollar	9¼-9½	9¼-9½	9⅛-9⅜	9⅜-9½	9⅝-9¾	[illegible]
Can. Dollar	8¾-9¼	8¾-9¼	9-9¼	9⅛-9⅜	9¼-9½	[illegible]
D. Guilder	5¾-5⅞	5¾-5⅞	5⅞-6⅛	6-6⅛	6⅛-6¼	[illegible]
S. Franc	9⅛-9⅜	1⅞-2⅛	3⅞-4	4⅛-4⅜	4⅜-4½	[illegible]
Deutschm'rk	5⅛-5⅜	5⅛-5⅜	5⅝-5¾	6-6⅛	6⅛-6¼	[illegible]
Fr'nch Franc	12½-12¾	12⅛-12⅜	12⅛-12⅜	13⅜-13⅝	13⅜-13⅝	[illegible]
Italian Lira	16-17	16¼-18¼	17-17½	17⅝-18⅛	18⅛-18⅝	[illegible]
Belg. Franc Conv	8-9⅛	8⅛-8¾	8⅝-9	9⅛-9⅜	9⅜-10⅛	[illegible]
Belg. Franc Fin.	7⅛-8	8⅛-8⅜	8⅛-8	9⅜-9⅝	9⅜-10	[illegible]
Yen	6⅛-6⅜	6⅛-6⅜	6⅛-6⅜	6⅜-6½	6⅜-6½	[illegible]
D. Krone	11⅛-11⅜	11½-12	10⅞-11⅛	10⅞-11⅛	10⅞-11⅜	[illegible]
Asia $ (Sing.)	9⅛-9⅜	9⅛-9⅜	9⅛-9½	9⅜-9⅝	9⅝-9¾	[illegible]

FT LONDON INTERBANK FIXING

(11.00 a.m. OCTOBER 21)

3 month U.S. dollars		6 month U.S. dollars	
bid 9 1/2	offer 9 5/8	bid 9 5/8	offer 9 3/4

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

FINANCIAL TIMES SURVEY

World Telecommunications

Entering an era of momentous change

THIS WEEK, telecommunications equipment suppliers, carriers, service providers, customers, senior government representatives and many other besides, converge from all over the world on Geneva for Telecom '83, the industry's quadrennial showcase organised under the auspices of the International Telecommunication Union.

The event, which is expected to draw well over 100,000 visitors, takes place at a moment when the industry and the markets which it serves are in the grip of a momentous—and often confusing—upheaval, which is sweeping away long-established traditions and opening almost boundless horizons of opportunity.

The frontiers, which have defined telecommunications for most of the past century, are being drastically redrawn as a result of rapid developments in technology, changing cost structures, new patterns of consumer demand and a reshaping of the institutional and regulatory framework within which the industry operates.

By GUY DE JONQUIERES

Historically, the industry has been built around, and deeply imbued with, the purpose of providing an *essential* public service. Its role has been to build, operate and maintain a huge and complex infrastructure to carry a uniform service available on equal terms to as many people as possible.

In most countries, the social desirability of that function has been explicitly recognised through the creation of legally-sanctioned telecommunications monopolies.
trauevent,whichg-

Today, however, a kaleidoscope of new choices and possibilities is opening up as the scope of telecommunications expands dramatically to encompass data processing, consumer electronics and even mass entertainment. As it does so, an industry whose development has been largely determined until now by what suppliers had to offer is being forced increasingly to dance to the tune of consumer demand.

The origins of this seachange lie in the convergence of data processing and communications, a process whose theoretical beginnings can be traced back to research done as long as 50 years ago but which has become a practical commercial reality as a result of the widespread availability of powerful yet inexpensive micro-electronic devices.

The most modern digital communications systems being installed today are designed to handle all types of information—voice, data, graphics, text and full video transmissions — in exactly the same form. Digital exchanges are generically identical to computers, while the once separate functions of the telephone, the data terminal and the television are starting to merge.

The inevitability of this technological convergence has long been evident to industry specialists. Its consequences are now spreading far beyond the laboratory and have set off a chain reaction of rapid change, which is being felt throughout the industrialised world and in many developing countries as well. For example:

- The recent far-reaching deregulation of the U.S. telecommunications industry, where American Telephone and Telegraph is being allowed to compete for the first time outside the telephone business in exchange for shedding its local operating companies.
- The liberalisation of the UK telecommunications market, where British Telecom has been stripped of its monopoly powers and is due to be privatised next year.
- A proliferation of new transmission methods and services, including high-power communications and direct broadcasting satellites, optical fibre circuits, cellular mobile radio communications and cable-borne computerised information systems.
- The growth of direct com-

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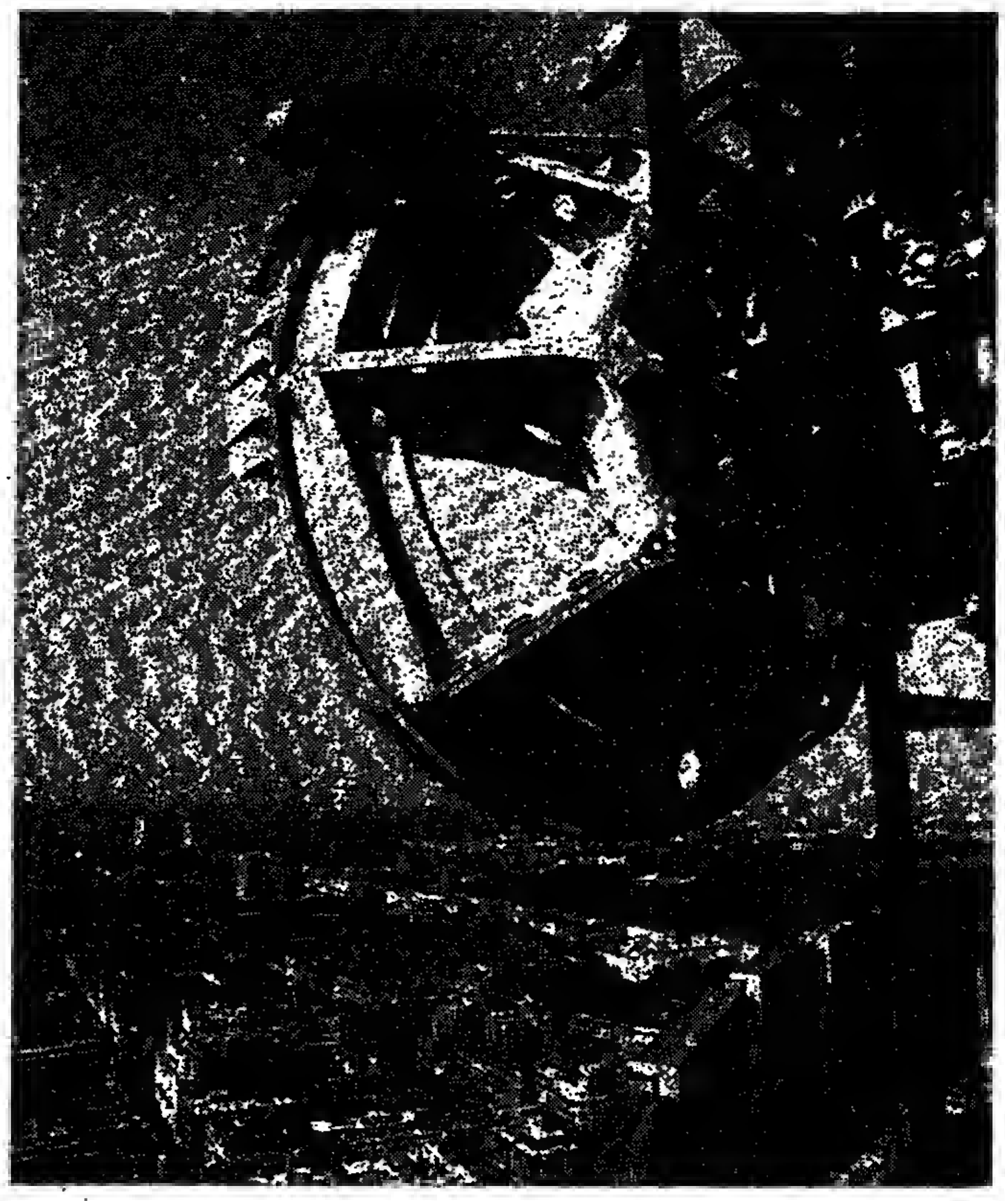


A British Telecom fitter leans out over London from the Telecom Tower to adjust one of the new dish aerials

PART ONE

Part Two appears tomorrow

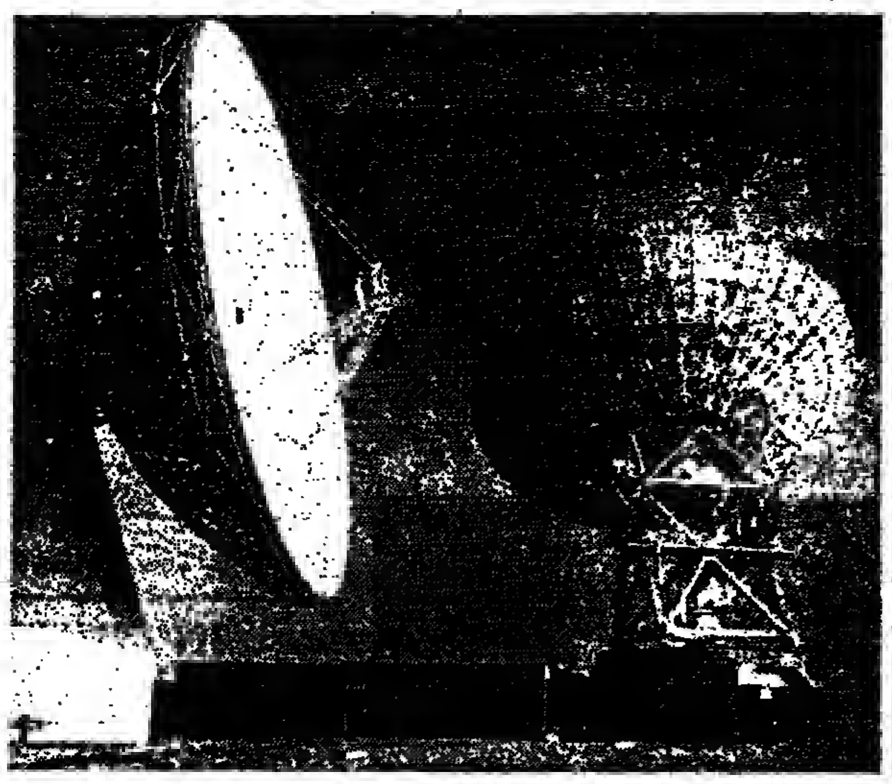
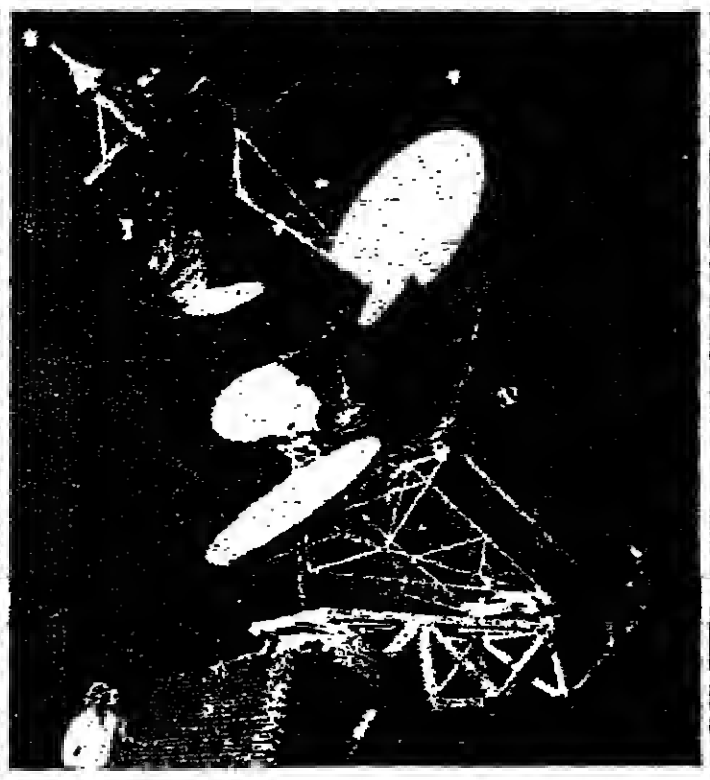
IN THIS SECTION

● IN PART TWO, tomorrow: The equipment manufacturers; the information revolution in the office, the quest for international standards; integrated digital networks; interactive services and the prospect of "the wired society."

Other articles will examine developments in technology, products and markets. These will include defence communications; mobile communications; video-conferencing; optical fibre technology; satellite communications; PABXs, data bases and publishing projects, communications in banking and financial markets.

● Editorial production of this survey was by Mike Wiltshire. Design Philip Hunt.

WORLD TELECOMMUNICATIONS II


Satellite and earth station —key components in the telecommunications revolution. Bahrain, one of the main banking centres in the Middle East, is linked to other financial capitals through the Bahrain Telecommunications Company's station at Ras Abu Jarjar (left).

In the U.S. (centre) the Intelsat V spacecraft is tested in an anti-echo chamber at Ford Aerospace and Communications Corporation's Palo Alto, California laboratories.

Video conferencing (right), a service developed in the UK by British Telecom, enables separate groups to meet face-to-face while remaining at their different company bases.

The radical reshaping of the U.S. industry is undermining traditional ground rules, as **Guy de Jonquieres** reports

U.S. market in the throes of upheaval

THE AMERICAN telecommunications industry is in the throes of the most violent and unpredictable upheaval experienced by any major sector of the economy this century. The ground rules which have governed its development for generations are crumbling, and the industry's future is being radically reshaped amid an exuberant and rumbustious free-for-all.

The whirlwind of change will affect sooner or later almost every one of the 100m-odd telephone users in the U.S., from large companies to residential subscribers. It is already shifting sharply the balance of competition within the industry and forcing its participants to rewrite their business strategies.

The transformation stems from two separate but intertwined developments. One is the impending break-up of American Telephone and Telegraph, the world's largest privately-owned company, which bestrides the U.S. industry like a colossus.

The other is an emphatic shift in official U.S. telecommunications policy, away from a tradition of monopoly and regulation to the promotion of open competition.

In the process, the rigid and increasingly unworkable boundaries which have long fenced off telecommunications from other unregulated industries such as computing are being erased, clearing the way for the development of a vast new information processing business.

As a consequence, telecommunications is being transformed from a utility, dedicated to providing a single, universally available, service, into a much broader, faster moving and more varied market. Whereas the pace of development was dictated in the past primarily by what suppliers were ready to offer, it will in future be determined much more by what customers demand—and are prepared to pay for.

Competitors are converging on the market from all quarters. For the first time, AT&T is preparing to do battle head-on with giants such as International Business Machines and Xerox. Companies such as Merrill Lynch, the financial services group, which were previously heavy users of communications services are also positioning themselves to become suppliers. New ventures are springing up all over the U.S. to exploit emerging market niches.

Confusion

The redrawing of the U.S. telecommunications map has, however, been far from a neat and orderly process. On the contrary, it has proceeded in a jagged and confusing fashion, as compromises were sought between the often conflicting interests of different branches of the federal government and the courts, AT&T, its competitors and its customers. Even today, many important practical details still have to be resolved.

"Why break up the world's best telephone system?" is a question which puzzles many Americans and foreigners alike. The simplest answer is that the decision was ultimately a business deal in the American business tradition. The loss of its operating companies was the price AT&T reluctantly judged it had to pay to obtain the freedom to venture beyond its traditional regulated businesses.

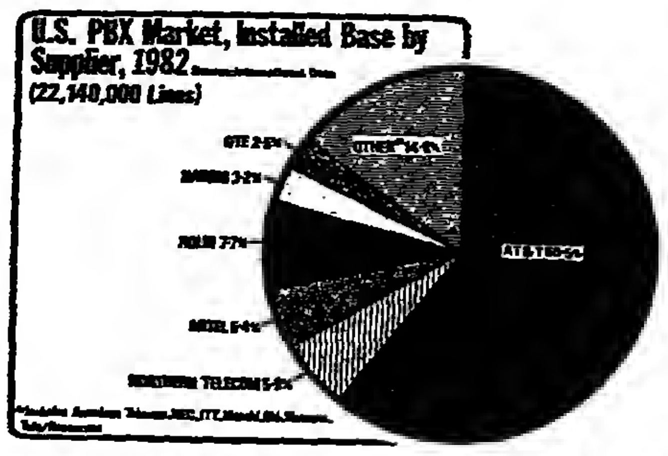
AT&T's virtual monopoly over telephone services in most of the U.S. dates back to the turn of the century. But it has been under attack from a variety of quarters for at least 15 years. Since 1968, decisions by the FCC and the Courts have permitted increasing competition in areas which previously had been AT&T's exclusive preserve.

Upstart companies such as MCI were authorised to operate long-distance telephone services in many parts of the country at prices which undercut AT&T's own, and by the end of the 1980s had cornered about 5 per cent of the business. At the same time, competitors were allowed to sell subscriber equipment such as telephones and private exchanges (PBXs) to Bell System customers.

AT&T resorted to a variety of tactics intended to limit these inroads. These in turn prompted a flood of private legal actions, alleging that it was violating anti-trust law. In 1974, the U.S. Justice Department brought its own anti-trust case, which incorporated many of the charges made in the private lawsuits and sought to break AT&T into several pieces.

Meanwhile, rapid advances in technology were starting to undermine the basis of AT&T's business. In 1956, the company had negotiated a "consent decree," or settlement of an earlier government anti-trust case, which restricted it to operating within markets subject to government regulation and prohibited Western Electric, its manufacturing arm, from selling outside the Bell System.

This seemed clearly enough to limit AT&T to common carrier activities. But it failed to anticipate the seachange wrought only a few years later by the application of digital technology to AT&T's traditional business and the consequent convergence of computing and communications.



As the rules stood, AT&T was barred from supplying equipment such as digital PBXs or services which combined data processing and communications, while its competitors were free to do so.

The FCC began wrestling with the policy implications of this technological revolution in the mid-1960s. But after two attempts to redraw the demarcation lines between the regulated world of communications and the unregulated business of computing, it finally abandoned the unequal struggle and declared at the beginning of 1980 that there was no meaningful distinction to be made between them.

Ruling

The FCC's decision, known as Computer Inquiry Two, exempted from regulation subscriber equipment and communications services which "enhanced" information by means of data processing. The FCC also ruled that AT&T could venture into unregulated markets, though it must do so through a new subsidiary, separate from its existing businesses.

That ruling, however, clashed with the restrictions imposed by the 1956 consent decree. Early last year, AT&T and the Justice Department announced they had agreed on an anti-trust settlement which permitted the company to take advantage of the new freedom offered by the FCC by modifying the earlier decree.

But in return, AT & T was obliged to divest to its shareholders its interest in its 22 Bell System operating companies, which represented about three-quarters of its assets of roughly $150bn. The companies, which are combining into seven regional groups, were limited to providing service within pre-determined local areas, though they were given the right to market customer equipment, publish yellow pages directories and operate mobile telephone systems.

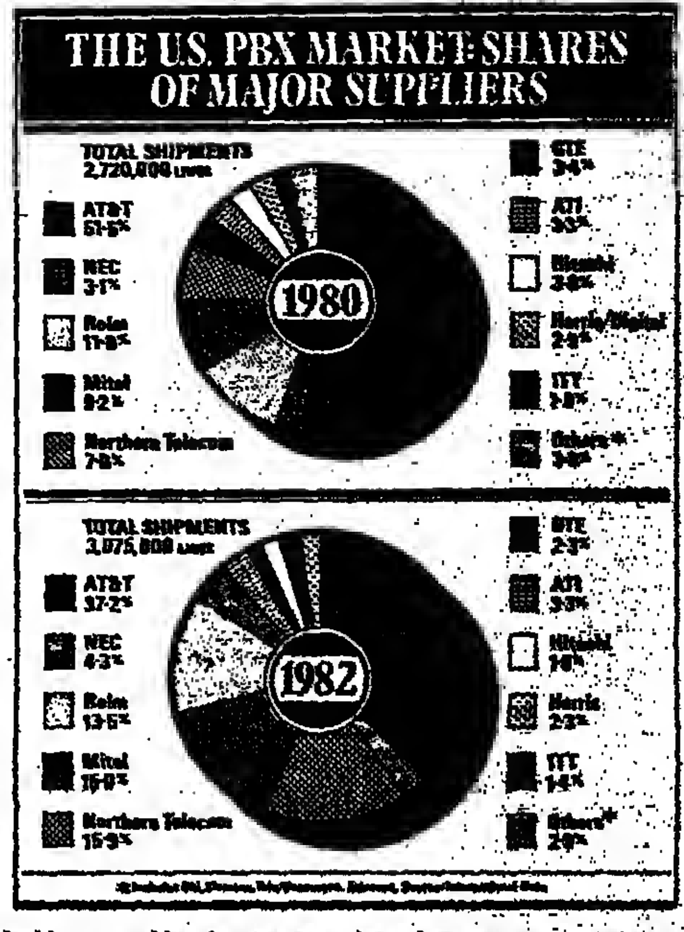
The Justice Department softened its earlier objectives, however, to allow AT & T to retain virtually intact its long-distance network, Western Electric and Bell Laboratories, its research and development facility. Western and the Laboratories were permitted to serve customers outside the Bell System.

Implementing the divestiture plan—which received final court approval last summer—is proving one of the most massively complex operations in U.S. business history. It entails disentangling a vast quantity of assets, dividing them between the residual AT&T and the seven regional companies and then reassembling them in working order.

The structure which will emerge from this sweeping reorganisation will in many ways be more difficult for Americans to understand than the cohesive Bell System which it replaces. Subscribers will have to get used to two sets of phone bills, one each for local and long-distance calls. They also face step rises in charges for local service.

Until now, charges for local services have been kept artificially low by means of a subsidy from AT&T's profits on long-distance business. This transfer will cease after the break-up. To cushion the impact on local telephone rates, the FCC has proposed a special system of "access charges" to compensate the local telephone companies for the use of their networks to carry long-distance calls although the future of this scheme has now been thrown into confusion.

Initially, most of the cost of access charges would be borne by long-distance carriers such as AT&T and MCI. But their share will decrease progressively, and by 1990 almost the entire burden will be shouldered by subscribers. Some estimates suggest that the move will double or treble the average household telephone bill.



AT&T argues that the advent of competition in long-distance services would have made such repricing inevitable anyway. But it remains politically controversial and the FCC scheme could still be significantly altered by Congress. Equally, parallel plans by the local companies to align their rates more closely with their true costs will depend on the attitude of state regulators.

It may well be some time before it becomes clear how the new system will work in practice. It will almost certainly take much longer to judge whether or not the benefits of the turbulent upheaval which is now engulfing the entire U.S. telecommunications industry outweigh the price being paid for them.

Industry entering an era of momentous change

CONTINUED FROM PREVIOUS PAGE

petition between companies in formerly separate markets, as International Business Machines moves into telecommunications equipment and services, while AT and T expands into data processing and office information systems.

- The formation of industrial alliances—frequently on an international scale—as manufacturers from different back-products, share costs and ex-portfolios of technologies and products, share costs and expand into new geographical markets.
- The increasing emphasis placed by many Governments in both the industrialised and developing worlds on using domestic telecommunications modernisation programmes as platforms for the development of national high-technology industries.
- The growing impact of telecommunications as a competitive factor in many businesses an dthe spread of sophisticated private corporate networks for voice and data transmission.

All these developments are influenced by—and themselves in turn influencing—important changes in the economic structure of the telecommunications industry. Rapid advances in technology are dramatically shortening product cycles, forcing manufacturers to step up development expenditures and carriers to increase their capital investment budgets in order to remain competitive.

Though the cost of microelectronic components continues to decline, the cost of writing the software needed to make them perform an ever wider range of sophisticated functions is rising at least as fast. Developing a family of digital public exchanges today can require an investment of as much as $1bn, with further spending needed to keep the equipment up-to-date after it enters production.

It is becoming increasingly difficult to recover such investments through sales to just one national market—even to one as large as the U.S. As a result, telecommunications manufacturers are seeking more and more to broaden their business internationally by means of direct exports, local manufacturing, joint ventures and licensing deals.

Exports

In the U.S., where the break-up of the Bell System next year will deprive its Western Electric manufacturing arm of a near-captive market, AT&T is looking overseas for the first time in half a century. It has agreed to set up a joint venture with Philips of the Netherlands to develop and market switching and transmission equipment internationally.

At the same time, foreign manufacturers are expanding into the U.S. Sweden's L. M. Ericsson, Japan's Nippon Electric and Britain's Plessey are among the manufacturers which have embarked on American in- fierce competition is putting vestment programmes intended to secure a larger share of the equipment market.

But much of the world market is still compartmentalised and fragmented by trade barriers and differing technical standards. In those sections of it which are freely accessible, pressure on margins as rival manufacturers battle for orders. Many industry experts forecast that these pressures will lead to a shakeout, which will reduce the number of major switching equipment manufacturers from almost a score to a mere half-dozen during the next decade.

The upheaval in the industry is also posing new challenges for telecommunications policy. Telecommunications monopolies in industrialised countries are having to adapt their practices in response to customer demand for new and more varied services and the mounting levels of investment required to modernise their networks.

In most of the industrialised world, the objective of a universally available telephone service has been largely attained, and the emphasis among carriers is shifting to a search for new ways to generate revenues from their networks. This has led to the introduction of a variety of new facilities, including packet-switched data communications, teletex and videotex information services.

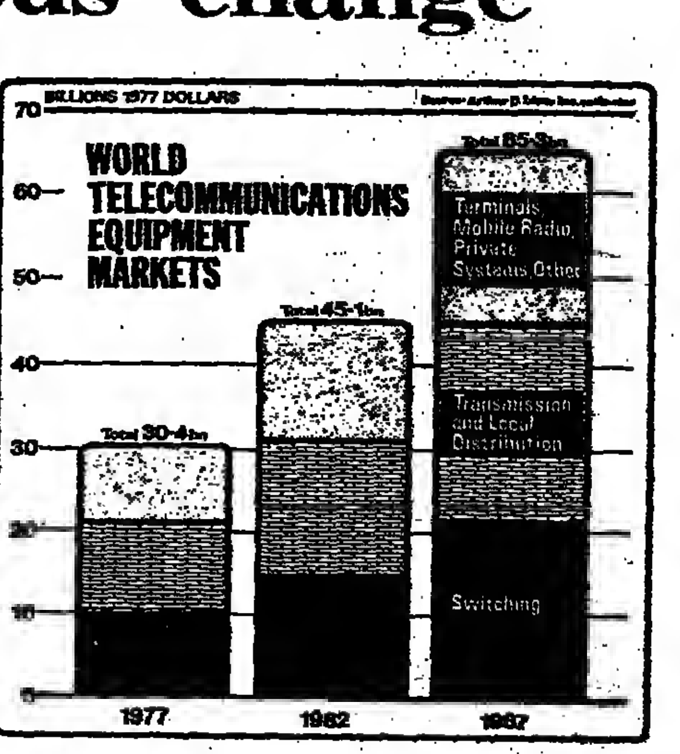
This approach involves risks, however. The demand for services such as videotex is still quite small, and its development requires entrepreneurial marketing skills which large and bureaucratic monopolies have never had to exercise before. Furthermore, the monopolies' charters require them to operate such services nationwide, while the markets for them may — at least in the early stages — be restricted to fairly specific groups of users concentrated in a few, well-defined areas.

Equally there is the danger that by keeping too tight a grip over the provision of equipment and services, the monopolies wil lstunt innovation and create supply shortages. Most continental European telecommunications authorities have acknowledged this by liberalising to varying degrees the rules governing the sale of subscriber equipment, though none has yet exteoded the same freedom to network services. The Dutch Government is, however, considering liberalisation in this area.

The U.S. and Britain have sought to create more dynamic and innovative telecommunications markets by opting overtly for wide-ranging competition extending to theoperation of the basic networks. In the U.S., a large number of rivals has sprung up to challenge AT & T in the long-distance telephone business, while in Britain, a single carrier, Mercury, has been licensed to compete with British Telecom.

In both countries, the result has been a reduction in charges for profitable long-distance traffic, but at the cost of a cut in subsidies for loss-making local service, which has been subject to politically controversial tariff increases. This rebalancing seems likely to continue, as prices are realigned more closely with costs. One of the key policy issues is now far the traditional objective of universal service can be reconciled in the future with the commercial adjustments required by competition.

The answer may not become clear for sometime. In this, as in many other areas, the telecommunications industry is involved in a major experiment. And by definition, the results of experiments cannot be known in advance.



- Left: TV by telephone aids medicine: British Telecom's slow scan TV (pictures sent in digital form over a telephone network) could revolutionise medical diagnosis in remote areas where travel is difficult. In Britain, Cornwall is proving a pioneer in the field of diagnosis-by-telephone

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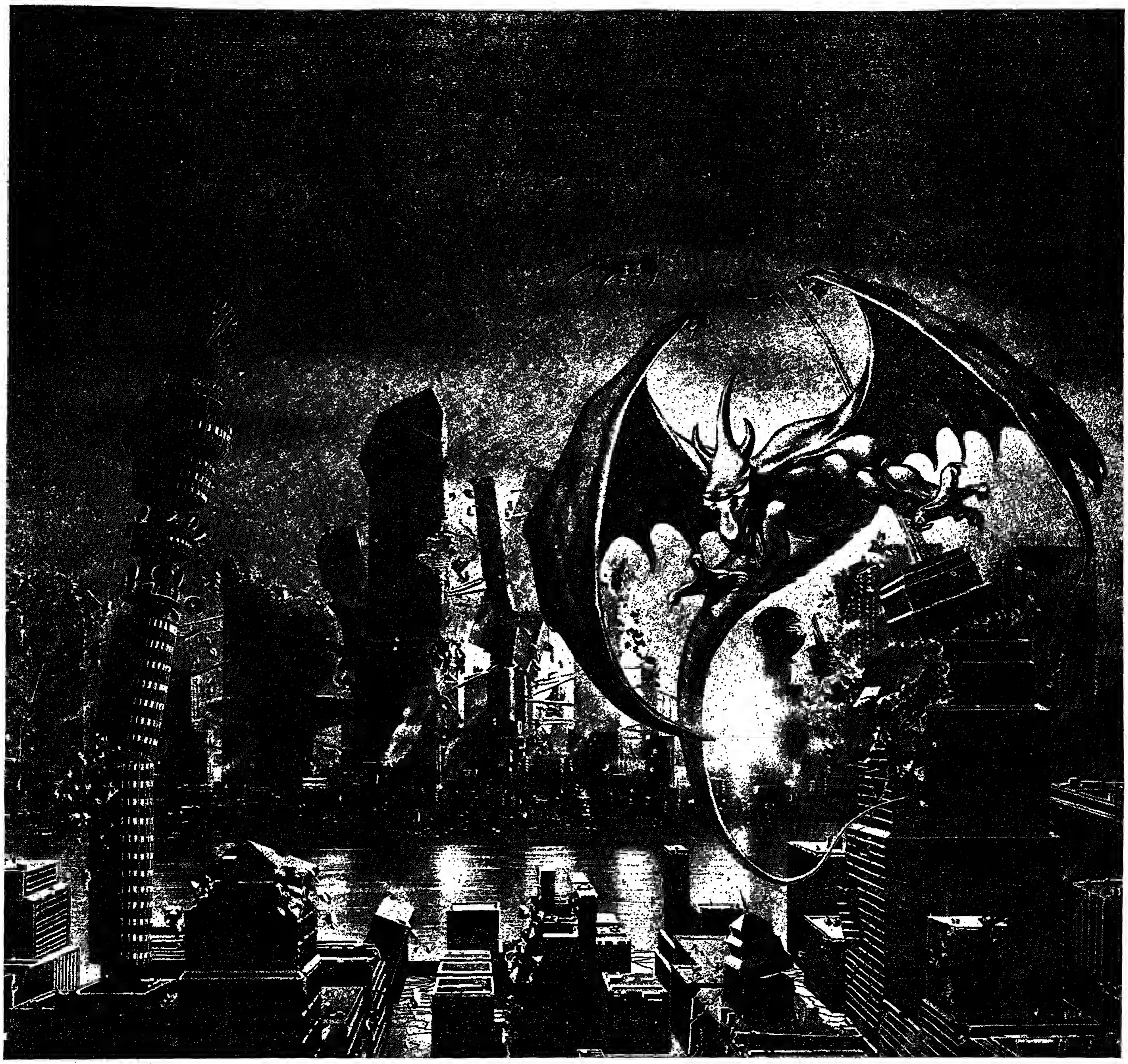

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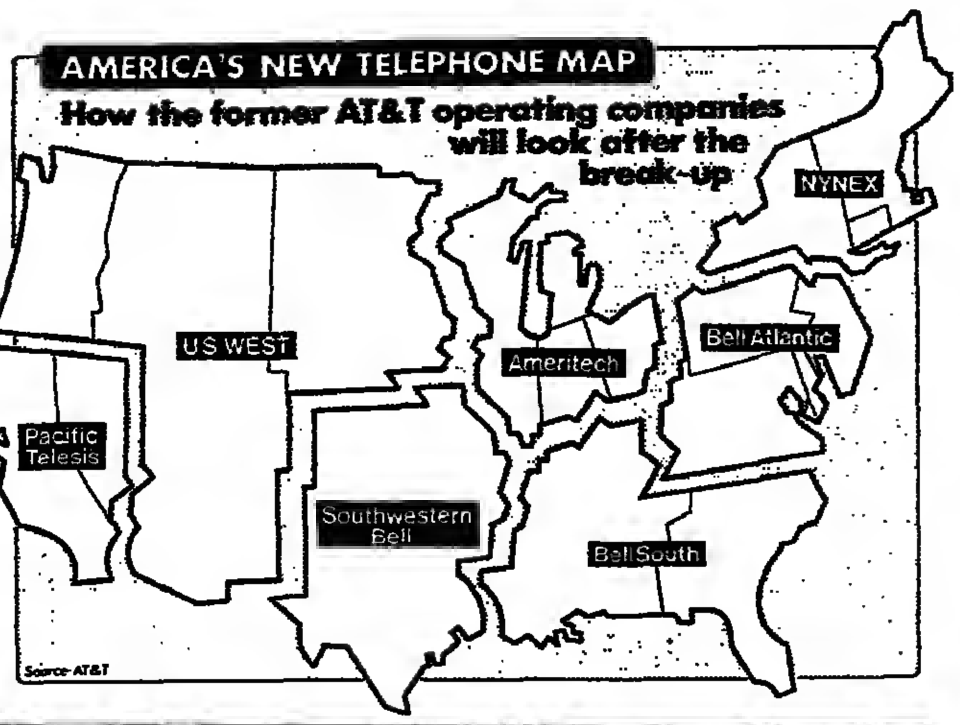
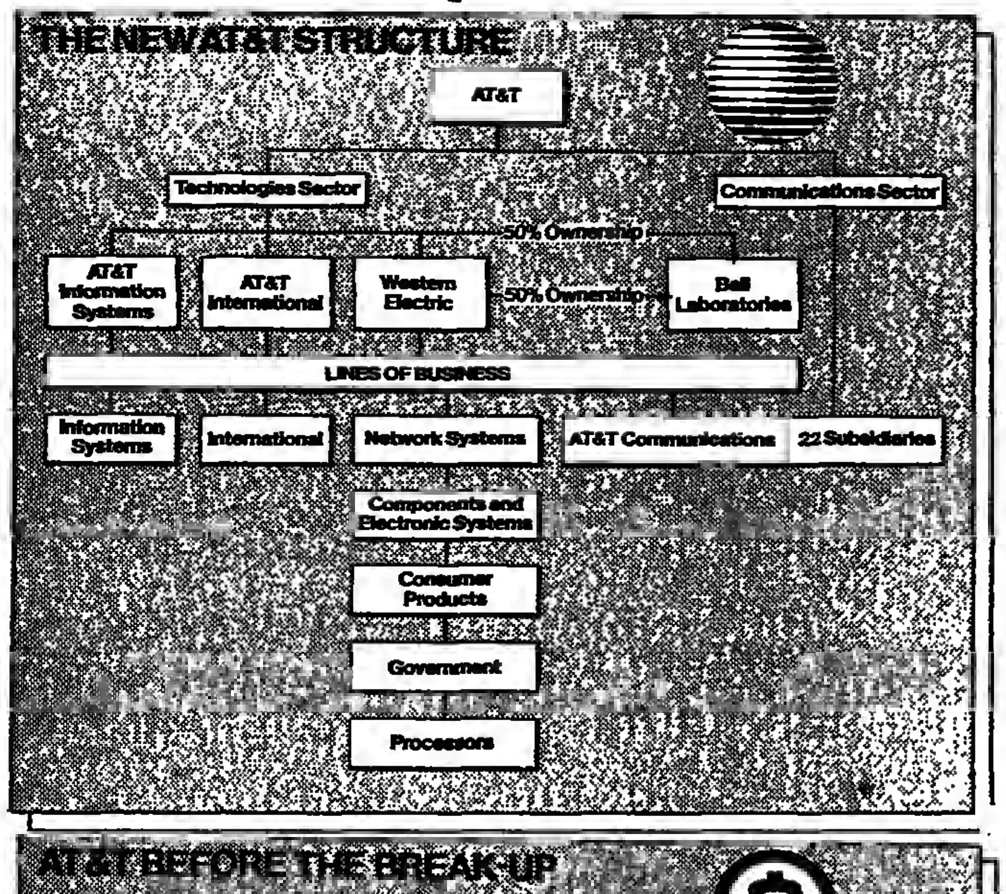
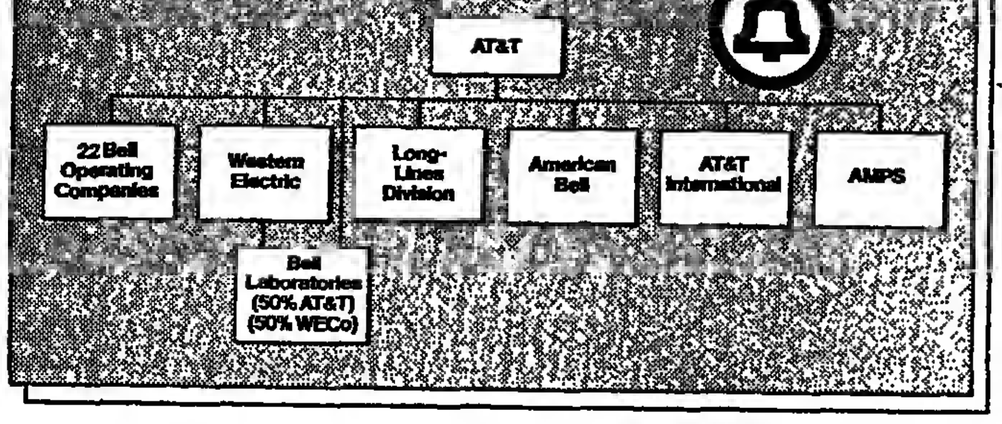
The company must transform itself from a highly integrated organisation into a more aggressive business geared to market demand

AT&T goes in search of a new corporate identity







TWO snapshots of a monolith in transition:

● The last issue of the Bell Telephone Magazine, AT&T's staff journal, features an article by o professor of sociology on coping with grief. Its purpose: to comfort those employees who are reacting to the imminent dismantling of AT&T with the same trauma and anxiety as ot the death of a loved one.

● A well-thumbed and heavily annotated copy of "In Search of Excellence" lies on the desk of Mr Charles Brown, AT&T's chairman. The book, by two monogement consultants, is a study of prominent U.S. companies which have, in the author's opinion, achieved success by developing their own "corporate cultures." Mr Brown, who has urged his top executives to study the book with care, says: "All its lessons are valuable to us."

Mr Brown and his colleagues face o formidable challenge: to disentangle themselves from the immensely complex business of divestiture which has absorbed most of their attention for the past several years and forge a sense of direction and strategic purpose for the new slimmed down AT&T.

"We have grasped the nettle and have our destiny in our own hands," he says. "We have served the American people as a mass-utility operation, and we are proud of that. What AT&T needs to do now is to provide customer satisfaction on an individual basis."

But AT&T is finding that motching words with deeds is no easy task. Its efforts so far to define a new role as a competitive enterprise have met with a number of setbacks. Many employees seem confused by the rapid changes going on around them and uncertain about the future. Mr Brown admits that the company still faces "o couple of very difficult years" as it adjusts to its new circumstances.

By Guy de Jonquieres

American Bell, the subsidiary which AT&T set up to supply dereguloted equipment and services, got off to a particularly unfortunate start. After spending $30m earlier this year to publicise the new venture—the largest advertising campaign in U.S. history—AT&T was told by the judge in the anti-trust trial that it could no longer use the Bell name. The subsidiary was hastily renamed AT&T Information Systems (ATTIS).

A further blow was the abrupt resignation last summer of Mr Archie McGill, the abrasive and controversial head of American Bell's largest division, Advanced Information Systems. Mr McGill, a former top marketing man at IBM, had played a leading role in preparing AT&T for competion and helping it build up a 6,000-strong sales force and customer support services.

Mr Charles Marshall, president of ATTIS, concedes that the unit performed sluggishly in the first few months after it entered business at the beginning of this year. "We didn't exhaust our customers' petience, but we tested it," he says. Now, he insists, things are going better. He says that orders for a recently-launched PABX, System 85, match this year's planned production capacity (though he won't give any figures) and forecasts strong demand for Net 1000, a sophisticated data network, when it is introduced commercially next year.

Wall Street analysts estimate, however, that ATTIS will lose $500m to $1bn this year, and many observers believe that it has a long way to go before it makes a real impact on the market. "It really hasn't developed into anything yet, it's certainly not a force," says Mr Gerald Ely, director of technology at financial services group Merrill Lynch.

AT&T executives complain that their task is made harder by restrictions imposed by the Federal Communications Commission (FCC). By requiring the company to keep ATTIS as a self-contained subsidiary, the rules mean that AT&T must maintain separate sales forces for ATTIS and for its long-distance services.

ATTIS' access to Bell Laboratories' huge research and development resources is also limited, and it has no manufacturing facilities of its own. Furthermore, AT&T's long-distance operations, which will provide most of the company's income after the break-up, are still subject to much more stringent regulation than its competitors.

The purpose of the curbs is to prevent AT&T from trampling on its competition. But senior executives argue that such safeguards have been made unnecessary by the decision to break up the company and indicate that they will lobby vigorously to have them removed once divestiture has been completed.

The nub of the challenge before AT&T, however, is to transform itself from o highly integrated organisation, many of whose parts dealt only with other sections of the group, into a commercially more aggressive business geared to market demand. In the past, for instance, its huge Western Electric manufacturing arm, which had a turnover of $12bn last year, has sold equipment only to customers within AT&T.

But its near-captive market among the Bell operating companies will be opened to wider competition after the break-up, and it needs to win new customers. AT&T is olready selling telephones through retail chains in the U.S. and has set up a joint venture with the Dutch Philips group to market switching and transmission equipment internationally.

Western also plans soon to start selling part of its vast semiconductor production on the open market, while AT&T has teamed up with home computer manufacturer Coleco to transmit videogames down the telephone line.

To equip itself to handla these increasingly diverse areas of activity, AT&T has undertaken a major corporate restructuring in the past few months. Until now, its operations have been organised by function—such as manufacturing, research and development. The objective in the future is to organise by product and market.

Half-a-dozen "line of business" (LOB) units have been created to handle major businesses, including components, computers, consumer products, network systems and U.S. government customers. According to Mr Victor Pelson, an AT&T vice-president supervising the restructuring, each unit is intended to be in charge of its own product development, manufacturing and marketing.

Decentralisation

The internal operations of Western Electric and Bell Laboratories are being rearranged to create groups which are directly answerable to the needs of the LOB units. Several of Western's factories are also being dedicated specifically to the needs of particular LOBs.

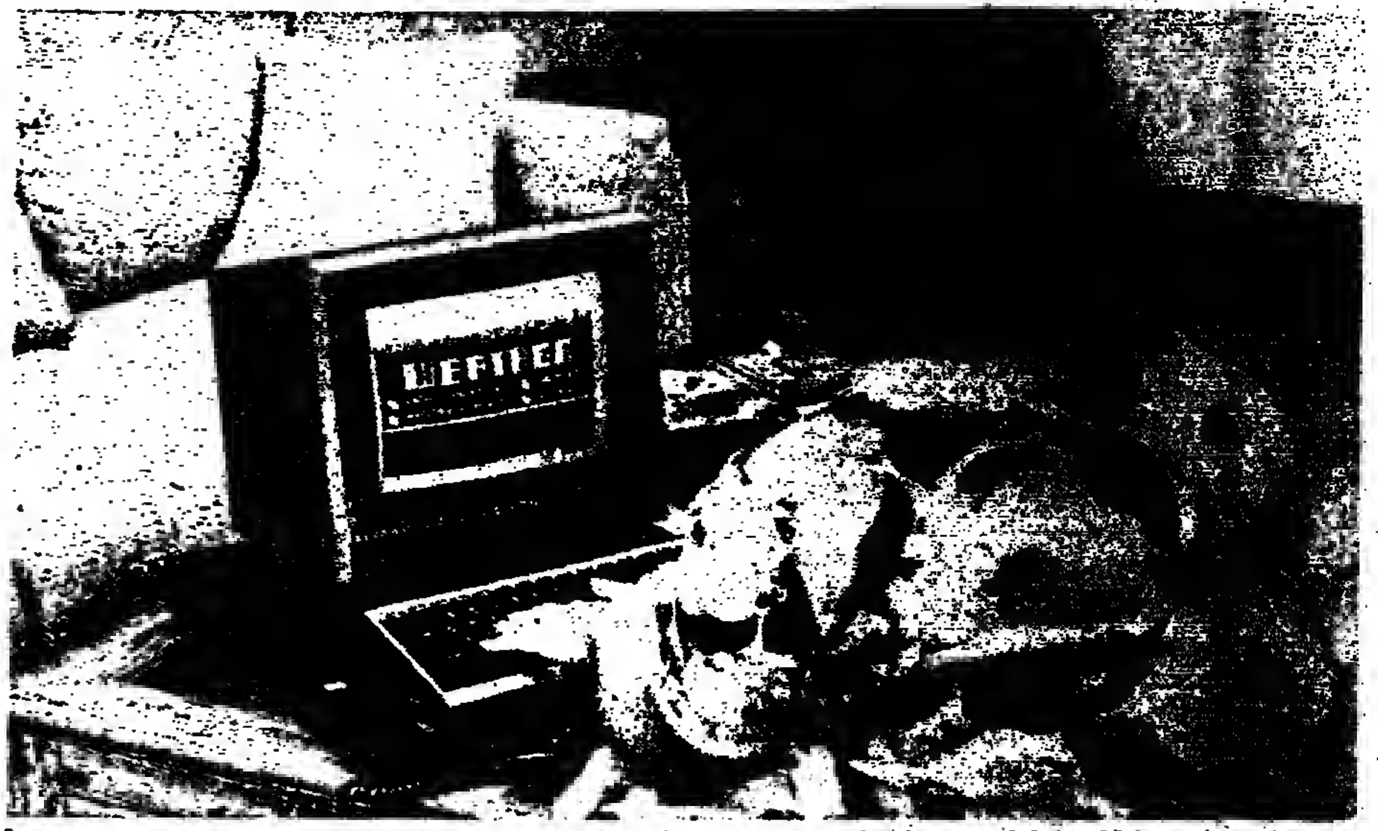
How well the new system will work remains to be seen. On paper, at least, it appears to the outsider a somewhat unwieldy compromise which aims to decentralise responsibility to the LOBs without jeopardising the integrity of Western and Bell Laboratories. The organisation chart is criss-crossed by a web of management reporting lines. "It is hard to tell who is ultimately responsible for what product," says one industry expert.

It is also uncertain how closely ATTIS and the other components of the new structure will support each other. Though Western Electric supposedly will manufacture for ATTIS and the LOB units, it has already appointed independent distributors of its own, while ATTIS is procuring some products from other manufacturers. Mr Marshall of ATTIS expects this trend to continue.

The different AT&T units are also likely to compete increasingly with each other—and with the divested Bell operating companies—for the same customers. Western Electric has already signed equipment supply contracts with several of the operating companies, which will be free to enter the market from the start of next year.

Most industry observers believe that Western is bound to lose some custom from the operating companies in the future. Whether it can generate enough new business fast enough elsewhere to avoid retrenchments remains to be seen. It has already laid off 17,000 staff in the past year and has announced plans to close three of its 32 plants.

Senior managers admit that their new battle plan is still in the experimental phase and has yet to be tested in action. But they insist that they are prepared to adapt pragmatically. "If anything in this structure doesn't work, we're going to change it," says Mr Pelson. "We're not going to let corporate boundaries interfere with business."



CBS and the American Telephone and Telegraph company are participating in a joint field test of an electronic home (videotex) information system in Ridgewood, New Jersey. The test system will provide a combination of news, information, shopping and banking transactions via display terminals in the home

The divestiture of the Bell operating companies will create new opportunities and challenges, reports **Guy de Jonquieres**

U.S. equipment market on verge of another shake-out

THE U.S. telecommunications equipment market, which has already moved a long way towards more open competition during the past decade, is on the verge of another big shake-up which will create both opportunities and challenges for American manufacturers and an increasingly large number of overseas companies.

The break-up of the Bell Telephone System at the start of next year will sever the close links between American Telephone & Telegraph ond its 22 local Bell operating companies and throw open a vast market which has hitherto been dominated by Western Electric, AT&T'e manufocturing unit. At the same time, the divested local companies will be free, after a one-year court-ordered hiatus, to re-enter the business of supplying subscriber equipment to the public.

The stakes are high. The total U.S. telecommunications equipment market last year is estimated at about $30bn. Of that, about $12bn was accounted for by Western Electric, the world'e largest telecommunications manufecturer, which has until now been permitted to sell only to other parts of AT&T.

In future, the operating companies, which are being organised into seven large regional groupings (ROCs), seem certain to cast their net well beyond Western in an effort to secure a wide range of up-to-date equipment at competitive prices. "We see them looking at just about everyone on the marketplace," says Mr Desmond Hudson, president of the U.S. subsidiary of Northern Telecom, Canada's biggest manufacturer.

Indeed, the ROCs have olready started to demonstrate their independance. U.S. West, the group serving the north-west and mountain states, bas placed orders for subscriber equipment worth $100m with Japan's Nippon Electric (NEC) and two young American suppliers, TIE and Ztel, as well as with Western. Pacific Telephone and Telegraph elso has orders worth up to $100m with TIE, ITT, Northern Telecom, Comdial, AT&T, and American Telecom, part of Japan's Fujitsu.

By no means all the ROCs have yet committed themselves to marketing subscriber equipment, and those which have are being selective about the types of product they buy. Few, for example, are expected to offer simple telephones, now low-margin commodity items which are supplied increasingly through retail stores. Many manufacturers, such as Northern Telecom, expect to sell in future through their own direct sales forces and independent distributors as well as through the ROCs.

Restrictions

Competition has been growing steadily in the U.S. since 1968, when the landmark Carterfone decision legalised the supply of none-AT&T equipment to Bell System subscribers. Today, almost e score of manufacturers are contesting the market for private branch exchanges (PBXs), and several dozen are battling for sales of smaller key systems.

Though AT&T remains the single largest supplier of PBXs, it accounted for less than 38 per cent of new lines installed last year, according to market research firm International Dota Corporation (IDC). Some industry experts estimate that its share will plummet further this year, to as low as 20 oer cent, amid customer confusion about the forthcoming break-up.

Reguletory restrictions designed to keep AT&T out of the data processing business have prevented it until recently from exploiting the shift from traditional analogue PBXs to computerised digital systems, which in their most odvanced form can switch both voice and deta. That has left the market for larger PBXs wide open to manufacturers of digital systems such as Northern Telecom and Rolm, while Canada'e Mitel, among others, has successfully exploited AT&T'e competitive weaknesses further down the product range.

Since it was freed to enter unregulated businesses ot the start of this year, AT&T has been scrambling to update its product line. But customer response to its first major product launcb, a digital PBX called System 85, has been lukewarm. "Many people bave been leery ebout System 85," says Mr Charles Robbins of IPC. "It was e very, very weak product announcement."

But the battle is far from over yet. AT&T's marketing push is expected to intensify competitive pressures which have driven PBX prices down by as much as 30 per cent in the past 18 months. Several manufacturers, notably Datapoint and Rockwell, heve decided to withdraw from the business, and others may follow.

Another new factor, whose significance cannot yet be accurately predicted, is the impact of International Business Machines. IBM earlier thie year purcbased e minority interest in Rolm. The alliance seems certain to strengthen Rolm's market position and paves the way for IBM's deeper involvement in office information systems.

AT&T still has an important card up its sleeve, however, in the shape of the roughly $10bn worth of subscriber equipment in use by Bell System customers. This equipment is due to become the property of its unregulated Information Systems subsidiary (ATTIS) from the start of next year and will be offered for sale to users. If, as expected, many customers take up the offer, they will both provide AT&T with a sizeable injection of cash and reduce the market avalloble to its competitors.

Nonetheless, AT&T undoubtedly faces o struggle if it is to rebuild the comprehensive distribution network provided by the Bell operating companies in the past. Though ATTIS has o 6,000-strong sales force, it is taking time to get organised and still lacks a wide enough range of attractive products, in the view of many industry observers. Moreover, some ROCs may be unwilling to distribute Western Electric equipment if it is already being supplied through ATTIS.

Important changes are also expected in the ROC's purchasing policies for switching and transmission equipment for their public telephone systems. The 22 local companies have been spending about $5bn a year on switching equipment, most of it procured from Western Electric.

This level of investment may have to rise in the next few years if the local companies are to fend off the threat of competition to their local monopolies. The Federal Communications Commission (FCC) has authorised a number of applicants to build their own local communications systems which by-pass the telephone companies' networks in some cities.

To remain competitive, the Bell System companies will probably have to occelerate the installation of modern digital equipment, which can handle both voice end high-speed data traffic. At present, less than 5 per cent of the entire AT&T switched network is digital, and less than 10 per cent of Bell System telephones are served by electronic local exchanges.

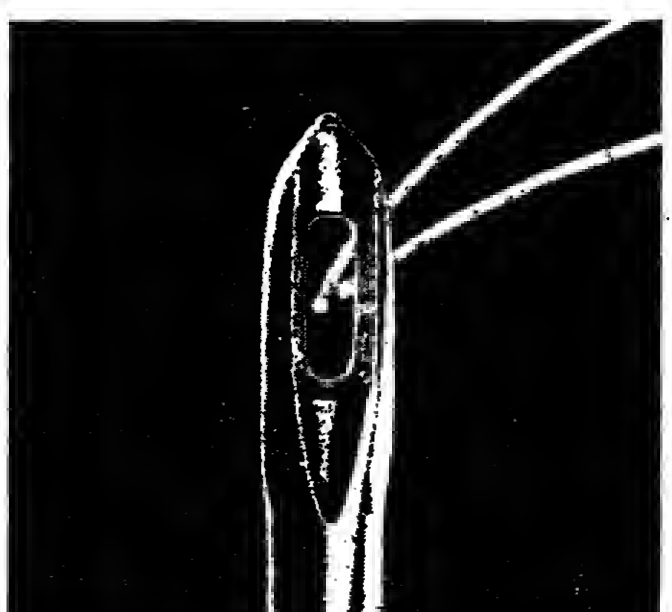
No independent menufacturer is probably better placed to exploit this demand than Northern Telecom, which has already profited from Western Electric's delay in developing o digital local switch. Northern Telecom has already won switching orders worth obout $1bn in the U.S., and its DMS exchange family has been blessed with official technical approval by AT&T. Thie year, Northern Telecom expects the U.S. to account for more than two-thirds of its digital switching revenues.

Foothold

GTE also supplies switching equipment in the U.S., though it has sold little ontside its own operating companies so far. ITT bopes to find U.S. customers for a modified version of its System 12 digital exchange, which was developed in Europe, while Britain's Plessey recently acquired a foothold in the market by buying the public switching business of Stromberg-Carlson, an old-established U.S. manufacturer.

Strong demand is expected for network equipment and terminals for the new generation of computer-controlled cellular mobile radio systems, which are due to enter service in many U.S. cities in the next few years. A number of manufacturers are competing for this business, including Sweden's L. M. Ericsson, Jepan's NEC and Northern Telecom, as well ae Western Electric, Motorola, Harris, ITT and GTE of the U.S.

The surge of competition in the long-distance telephone business is also providing a boost to equipment suppliers as AT&T's smaller rivals invest heavily in modern inter-city networks. The biggest of them, MCI, expects to spend et least $1bn annually for eeveral years to build new capacity and recently placed a sizeable switching order with Ericsson.



Two tiny items of technology that are helping to bring a revolution in the telecommunications world. Left: a highly integrated electronic chip, viewed under a magnifying glass. This chip forms the heart of the new ITT Systems 12 digital exchange.

Above: A single optical fibre which can carry 2,000 simultaneous telephone conversations. Dozes of fibres can pass through the eye of a needle.

When it comes to telecoms London towers above the rest.

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Explosion of competition in U.S. long distance service

RARELY HAS any industry experienced such a sudden explosion of competition and consumer choice as has occurred in the past few years in the U.S. market for long-distance communications.

Fifteen years ago, the only company offering long-distance services was American Telephone and Telegraph. Five years ago, the number had grown to about half-a-dozen. Today, it is hard to tell how many competitors there are, but estimates range as high as 600, all offering services at prices ranging from one third to one tenth of those charged by AT&T on selected routes.

Altogether, according to industry analysts, AT&T's smaller competitors have succeeded in capturing as much as 10-15 per cent of the $40bn a year long-distance market. Most of the recent newcomers have grown up as a result of a Federal Communications Commission (FCC) ruling about two years ago, which required AT&T to offer bulk capacity on its circuits for resale to third parties.

Typically, the so-called resale common carriers which have taken advantage of this freedom offer a geographically-restricted service on lines leased from AT&T. Their only major capital investment is in an exchange to connect their customers, so that they can afford to undercut substantially the tariffs charged by the Bell System.

Industry experts believe that the sudden upsurge of resale common carriers will prove only o short-lived phenomenon, and that most will be driven out of business by a squeeze on their margins in the coming months. But it is clear that many of AT&T's competitors are here to stay and are likely to increase their market share. To survive, however, they will need to evolve new strategies.

Compet[illegible]n in U.S. long-distance transmission dates back to 1968 when MCI Communications, then a tiny upstart, won the right to offer a service on a microwave radio link between St Louis and Chicago. Since then, MCI has connected many other cities, built 15,000 miles of network of its own and increased its annual turnover to more than $1bn. Today, it has more than 1m customers, including both businesses and private households.

MCI remains AT&T's leading challenger, with about 3 per cent of the leng-distance market. Similar services are also offered by ITT, GTE's Sprint subsidiary and Satellite Business Systems, a joint venture between International Business Machines, Comsat and the Aetna insurance group which uses sophisticated satellite facilities to beam voice and data communications between subscribers in the U.S. and Canada.

Until now, these companies have competed against AT&T chiefly by charging lower tariffs. But the imminent break-up of the Bell System is expected to reduce the room for price competition and require them to focus more on quality and diversity of service.

'...it is clear that many of AT&T's competitors are here to stay and are likely to increase their market share.'

The break-up will have two effects on the economics of long-distance telephone services.

1—It will give AT&T greater scope to cut its tariffs by removing the substantial subsidy which it has paid to its operating companies in the past to offset losses on their local networks. AT&T recently filed tariff reductions averaging about 10 per cent with the FCC.

2—It will increase the long-distance carriers' costs. The FCC has designed an elaborate system of "access charges" which the carriers will bave to pay from the start of next year for the right to connect with the Bell System companies' local networks. The charges, which will decline progressively until 1990, are intended to compensate for removal of the automatic AT&T cross-subsidy. The short-term outlook has, however, been clouded by the FCC's decision to postpone introduction of access charges by three months until early April. The planned reduction in AT&T's tariffs will also be delayed until that date.

AT&T is due to pay a special premium charge for the first four years, until competitive advantages which it enjoys over its smaller rivals are eliminated. These are at present obliged to use lower-quality local lines, so that subscribers must dial lengthy access codes to use their systems. It will take some time to phase out these anomalies.

The details of the access charge plan are still subject to modification. AT&T's competitors argue that their own charges have been set too high and de not make adequate allowance for the inconvenience their customers will face. There is also pressure building up in Congress to alter the FCC decision.

AT&T will still be subject to tighter regulatory constraints than other carriers in the foreseeable future. It will have to obtain FCC approval befere making any changes to its services and tariffs (its rivals need only to notify the FCC of their intentions) and will be required to market "enhanced" services such as electronic mail separately from its long-distance voice transmission.

However, its rivals do net under-estimate AT&T's power and many are starting to stake out broader business bases to secure their future. One option which some of them are taking is to offer a wider range of services, beyond simple voice transmission, to their customers.

MCI recently launched a sophisticated electronic mail service, which will transmit text between customers in different cities. The messages can be sent direct to a computer or, for a lower charge, be delivered to their final destination by local mail. MCI is also bidding for licences to operate cellular mobile radio services in several American cities and hopes to expand in international communications markets through its recent acquisition of Western Union International.

Combined Networks, one of the largest resale common carriers, also plans to launch a wider range of business communications facilities. It has fermed a joint venture with Britain's Air Call to set up a chain of "electronic business centres" in the U.S. These will offer advanced telex, electronic mail, service dispatch and computerised telephone answering services.

Many of AT&T's rivals are also seeking to build more solid foundations for their business by building advanced transmission systems of their own, which will reduce their dependence on AT&T's circuits. The approach of the break-up has triggered off a small boom in network construction, with new projects springing up all over the country.

MCI has emberked on an ambitious investment programme worth more than $1bn a year. It plans to build more than 4,000 miles of high-capacity optical fibre circuits and to buy a number of satellite transponders. According to Mr Orville Wright, MCI's president, its annual spending will continue at more than $1bn for several years.

Similar ventures are also being undertaken by other investors, with a view to selling or leasing capacity te carriers and ether large users. Southern New England Telephone plans to join forces with CSX, one of the largest U.S. railways, to lay optical fibre circuits along rail track. Britain's Cable and Wireless is working with another railway, the Kansas-Texas-Missouri, on a similar scheme.

These networks will be marketed primarily to resale common carriers anxious to obtain their own, independent, transmission circuits, and to large companies which are developing private communications networks of their own.

The long-distance communications market is growing by about 12 per cent annually, and Mr Wright of MCI forecasts that it will be worth $90bn by the end of this decade. AT&T's rivals are expected to capture e significant proportion of this growth. "There is ne way to get around the fact that AT&T faces a loss of market share," says Mr Richard Toole, telecommunications analyst at brokerage house Merrill Lynch.

But new circuit capacity is being built at such a rate that some industry analysts fear that it will outstrip the growth of demand, leading to a glut which would plunge the industry into fierce price war and uncontrolled price-cutting. If that happened, the impact would fall hardest on AT&T's smaller competitors, particularly the most recent newcomers.

Mr Wright of MCI thinks that that is an unlikely outcome. Bot other observers believe that the issue is still in the balanee. "The question is, have we learned from the deregulation of the airline industry?" asks Dr Alan Pearce, an independent telecommunications consultant. "Are we going to see the market being carved up between carriers, or are we going to have price wars?"

Guy de Jonquieres

AT & T AND REGIONAL HOLDING COMPANIES PAST PERFORMANCE*

Bell operating companies, grouped by regional territories	1982 operating revenue and sales $m	% change from 1981	% growth rate for 6 years	1982 capitalisation† $m	Debt ratio‡ 1982 %	1982 return on equity %	1982 network access lines (000)	Number of telephones(1) 1982	Population (2) of area served 1980 census (000)	% change(2) from 1970 census figure
AT & T	65,093.02	+11.82	+12.27	138,405.00	40.59	11.71	84,705	133,978,040	[illegible]	[illegible]
NYNEX	9,686.29	+12.09	+10.05	13,192.49	39.33	12.43	12,552	17,405,016	[illegible]	[illegible]
Bell Atlantic	8,389.32	+11.54	+11.12	12,960.98	36.72	11.64	[illegible]	[illegible]	21,975	[illegible]
Bell South	10,307.79	+11.96	+13.75	16,021.59	36.76	13.49	13,234	[illegible]	[illegible]	[illegible]
Ameritech	8,723.80	+ 8.09	+ 9.61	12,980.60	38.08	11.33	13,931	[illegible]	[illegible]	+ 3.53
Southwestern Bell	7,711.10	+13.69	+15.14	12,009.10	38.93	11.98	10,124	[illegible]	24,425	[illegible]
Pacific Telesis Group	7,855.49	+15.20	+14.05	12,935.00	59.71	12.11	10,567	15,971,081	[illegible]	[illegible]
U.S. WEST	7,396.20	+ 8.94	+12.88	11,720.79	37.68	11.54	10,387	[illegible]	[illegible]	[illegible]
Cincinnati Bell‖	397.41	+11.26	n.a.	843.90	37.00	10.90	617	n.a.	n.a.	n.a.
Sthn. New England Tel.¶	1,081.00	+ 7.78	n.a.	1,968.00§	41.00	11.40	1,536	n.a.	[illegible]	+ 2.51

* Reflects Bell operating companies' 1982 results. † Capitalisation figure includes equity and long term debt. Actual regional holding companies' capitalisation figure is slightly smaller because interlata and intrastate facilities' assets will be transferred to AT & T. ‡ Does not include debt maturing within one year. § Total asset figure. ¶ 24 per cent owned by AT & T. ‖ 32 per cent owned by AT & T.

Source: Salomen Brothers, except: (1) AT & T Central Services Organisation, (2) U.S. Statistical Abstract.

Regional regroupings presage higher local charges

Until a few weeks ago only one thing about the Bell System break-up seemed certain. U.S. telephone subscribers would end up paying more for the basic local service.

That is probably still true, but the Federal Communications Commission's recent decision to change a key element in the divestiture agreement, by postponing the introduction of a new rate monthly charge on telephone users, had added a new note of uncertainty into an already complex procedure.

What was striking about the original terms of the divestiture was that if local telephone users ended up paying more that was no accident. Indeed, one of the fundamental cornerstones of the American Telegraph and Telephone (AT&T) divestiture plan was that the provision of telephone services in the U.S. should be both more competitive and eventually priced to reflect costs through the elimination of subsidies.

Since historically long distance toll calls have been used to subsidise local service — a total of $10.7bn er between 50 and 60 per cent of the price of every leng distance call made through AT&T last year was used to subsidise local service —the phased removal of cross subsidies meant local rates must rise.

"Telephone charges are currently priced with a mind towards social objectives rather than directly on cost of service," said Mark Luftig of Salomon Brothers in a recent report. "At present high volume interexchange and business users help pay the fixed costs of low volume local users."

'Each of these new telephone giants will rank, in its own right, among the 10 largest utilities in the U.S.'

For the 100m residential telephone subscribers in the U.S. the effect of the AT&T break-up could be that the price they pay to receive a "dial tone"— a local connection into the telephone network — will increase and could double over the next five years.

Such a price rise would be a shock to many telephone users. A recent New York Times/CBS news poll revealed that only 29 per cent of the respondents in a nationwide survey said they had heard or read enough to understand what will happen on January 1.

Of those who said they did understand the change, 41 per cent said they thought it would make the service worse, 25 per cent expected better service, 16 per cent said the service would remain the same, and 18 per cent did not know.

That the break-up of Bell should cause confusion, given its complexity, is probably no surprise. The AT&T divestiture represents a massive change, not only for telephone users but also for AT&T and its 3.2m shareholders who currently hold almost 1bn AT&T shares.

Impact

The most obvious effect of the break-up will be that the 22 Bell operating companies (BOCs), which primarily provide the local telephone service and last year accounted for 45 per cent of AT&T's $65bn in revenues, will be spun off from the parent and reconfigured into seven regional holding companies.

Each of these new telephone giants will rank, in its own right, among the 10 largest utilities in the U.S. Together they will continue to provide over 80 per cent of the nation's local telephone lines.

Customers, used te dealing with the local telephone company—which installed, rented and maintained telephone equipment, handled all local calls and automatically connected the caller to AT&T leng-distance services—are in for a surprise. The familiar eld local telephone company will still handle local calls within the beundaries of 165 new local access and transport areas (LATAs) but customers, who are already free to buy telephenes and set up their own telephene equipment, will have to contract with a separate company, the new AT&T or one of its competitors like MCI or GTE, for long-distance calls that cross LATA boundaries.

In additien, although the local phene company will, in the main, continue to be their first point of contact with the system, the structure of their telephone bills and the man whe comes te repair eld equipment will also change.

For the seven regional holding companies, the next few months will be crucial. Their basic challenge is to retain and extend the role of the local telephone companies as the principal supplier of local communications services throughout their areas while managing the drastic changes associated with divestiture.

U.S. telephone subscribers will soon pay more: Above: a Bell public call box in use at the Epcot Centre at Orlando, Florida

Explaining the switch in pricing strategy to customers, and to state public utility commissioners who regulate local phone charges, is probably the most difficult and the most pressing task they face.

"We are moving towards cost-based pricing on all our products and services," says Mr Delbert Staley, Chairman of Nynex, the regional holding company for the north-east region.

That means that instead of the "patchwork" of cross-subsidies of the services provided by the local telephone company, in future prices will be related to the cost of actually providing them.

Most residential customers can currently make an unlimited number of local calls for an average flat rate charge of $11.38 a month. Bnt the cost of providing this service is probably about twice this.

To make up the difference between local service costs and charges AT&T has subsidised the local services and particularly those in rural areas through long distance telephone charges.

But from next year that all changes. AT&T will take over any installed telephone equipment (the embedded customer base equipment) and the long distance telephone system will be split off from local services allowing AT&T to compete more directly with the other toll service providers.

As a result the local telephone companies will lose revenues which must be made up if they are to remain competitive.

Adding to the pressure for a pricing re-alignment, the local telephone companies know that they are likely to lose additional revenues if they continue to average phone rates throughout a state because this tends to push up the share of the cost borne by major corporate users. As a result some major companies have already begun to "by-pass" the local telephone system using new technologies like in-heuse microwave and satellite systems.

The threat of by-pass is real and growing. A number of major U.S. corporations—industrials like Westinghouse and Heinz and financials like Citibank, Merrill Lynch and Sears Roebuck—have already installed by-pass systems or have plans to de so.

Heinz, for example, installed its own microwave radio link after the local telephone com[illegible] refused to lower the rate it was charging the food company for special lines between two of its offices in downtown Pittsburg.

Perhaps the most ambitious by-pass project is the teleport project on New York City's Staten Island. This joint venture project between Merrill Lynch, the Port Authority and Western Union will eventually consist of 17 earth stations to send and receive signals from satellites; the stations in turn will be linked by fibre optic cable to users in the Wall Street area.

Cost based pricing and measured telephone calls are seen as the only way to avoid the possibility of losing more business customers, making up the lost revenoes when the installed customer base is transferred to AT&T and replacing the long distance subsidy.

Accordingly the Federal Communications Commission and the local telephone companies have proposed two distinct packages of new customer charges.

The local telephone companies have been filing requests for huge rate increases totalling over $6bn with local public utility commissioners. Rural regions in general are seeking to increase charges significantly in the densly populated metropolitan areas and would begin the process of forcing business and residential charges to converge.

The rate rises are highly controversial. Mr Staley of Nynex says: "There is no question but that regulators see the need for subsidy on certain services." In the New York area, for example, the commissioners have held the telephone box coin rate to 10 cents a call for 32 years.

Tough problem

"They also see the need for a subsidy I believe, of some sort, on residential service," he adds. "So consequently we have to show the need to move away from these kinds of subsidies, and that subsidies can not exist in a competitive environment. It is a tough, very tough, political problem, and a tough political decision, but, nevertheless, it is a decision that bas to be made."

Like telephone company executives elsewhere in the U.S. Mr Stalcy believes regulators will ventually see the need to reduce subsidies. Nevertheless, one of the factors determining the regional companies' performance over the next few years will be the regulatory environment they operate within. Those operating in a hostile environment are likely to see this reflected in their projected earnings and in their new share price.

The other, and perhaps more controversial, set of rate rises which will hit local telephone users are the FCC's proposed package ef "access charges." These are designed to recover fer the local exchanges, over time, the cest of providing interstate occess and will fall both on the interexchange carriers themselves and on the end user—the telephone owner.

Under the FCC's plan, unveiled in July, the new AT&T and other toll service suppliers which will operate long distance services between LATAs will continue to pay a share of the estimated fixed $8.5bn cost of maintaining local "loops" to customer premises. The interexchange carriers will also pay a traffic sensitive access charge for linking into a local telephone network.

The immediate impact of this will be to reduce dramatically AT&T's payment to the local telephone companies while increasing the payments made by the other long distance carriers. This will enable AT&T, which has already announced a planned $1.75bn reduction of between 10 per cent and 15 per cent in long distance call cherges, to compete more effectively with other carriers who are currently substantially chraper.

But the longer term intention of the FCC plan is to reduce the long distance subsidy of local service to almost zero. Therefore the FCC has proposed an initial $2 a month residential bill surcharge and up to $6 a month on business customers. Over the next seven years these charges would be increased while the long distance carriers' continuing subsidy of fixed costs would be all but phased out. Earlier this month the regional holding companies filed their new access charge schemes in line with the FCC's plans.

These customer-imposed access charges are fiercely opposed by some of the state commissioners, consumer groups and a powerful Congressional lobby.

Moratorium

As a result both House and Senate committees have recently proposed bills which would place a moratorium on the imposition of access charges.

But a few weeks ago the EEC seized the initiative by postponing the planned introduction of the access charges until April 3 and, in the process, halting AT&T's planned interstate long distance telephone charge reduction plan.

The FCC's decision came as a "shot out of the blue" and took AT&T, which had written to every congressman urging them not to undertake "eleventh hour amendments," and taken full page advertisements in the national press to state the case, completely by surprise.

The FCC action clearly angered AT&T has added a new note of uncertainty into the plans of the regional holding companies as they approach divestiture.

Although their primary business is expected to remain the provision of local telephone services—most Wall Street analysts view them as "high quality utilities" which will satisfy much of their capital spending needs internally—they will be allowed to undertake other business activities.

Specifically, the regional holding companies will continue to sell advertising through yellow pages, a business that generated $3bn in revenues last year, they will own cellular radio franchises and can, if they choose, re-enter the business of selling telephones and other customer equipment though they are not allowed to manufacture it.

For the new regional companies, and their customers, 1984 will still mork the start of a new era. But the access charge issue is likely to cast a political shadow over the affair.

Whatever the result of the debate over the new charges — the episode will have proved that local telephone charges and the notion of a "universal service" is a political hot potate. It will also have raised further questions about the rationale behind the AT&T divestiture and the anti-trust suit which led to it.

Paul Taylor

Further aspects of the American scene are discussed by Paul Taylor on Page XXVII of Part 2, to be published in tomorrow's issue.

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Britain's programme to liberalise telecommunications: **Guy de Jonquieres** examines the progress achieved so far

UK plan has far-reaching objectives

IT IS just over three years since Sir Keith Joseph, then Industry Secretary, announced that the British Government intended to remove the Post Office's traditional monopoly over the provision of telecommunications equipment and services and throw the market open to wider competition.

Sir Keith had three broad objectives: to stimulate the growth of a more vigorous, innovative and entrepreneurial supplier industry; to boost the British economy by providing users with a wider freedom of choice and a technologically advanced and efficient communications infrastructure; and to sharpen the performance and commercial aggressiveness of the Post Office's telecommunications business (later split off and renamed British Telecom).

His decision was, and remains, without precedent in Western Europe. Since it was announced, the policy framework within which the British telecommunications industry has functioned for most of this century has been radically transformed, a phased programme of liberalisation set in train and the foundations laid for a new system of regulation.

Today, the Government is preparing to take its radical action a stage further by selling 51 per cent of British Telecom (BT) to private investors. The sale, planned for the autumn of next year, is expected to raise about £4bn and would be by far the largest equity flotation made in Britain.

Progress

How well has Britain's experiment gone in practice? Among its most positive results to date is, undoubtedly, the change of attitude within BT. The organisation—or at least its senior management — has reacted to liberalisation with an enthusiasm and aggressiveness which would have been hard to credit even two years ago. Indeed, the vigour of its response far outpaces the extent of the immediate competitive threat to its business.

BT has launched a wide range of new competitive products and services, ranging from microcomputers to electronic mail, and accelerated the introduction of network enhancements such as high-speed digital circuits. It has also set tougher terms for its traditional suppliers, such as GEC and Plessey, forcing them to slash their prices for products such as the Monarch PBX and to compete for System X, Britain's family of digital public exchanges.

BT has begun to take long overdue action to instal proper financial and management controls and has set about dividing its main lines of business into profit centres. It still has a loog way to go, however; its public network is burdened with much obsolete equipment, it is handicapped by a history of poor labour relations and bureaucratic attitudes are still widespread among middle and lower levels of management.

The opportunities offered by liberalisation have also attracted fresh investments in Britain's telecommunications industry, particularly from overseas. Canada's Mitel has sited a large, modern factory in South Wales, and Northern Telecom, also of Canada, recently announced plans to start manufacturing in the UK.

Joint venture

GTE, tha largest American independent telecommunications company, has formed a joint venture in equipment with Ferranti, while Motorola, also of the U.S., is enlarging its radio communications production in Britain. Plessey, by contrast, has responded to tho growth of competition at home by expanding in the U.S. through acquisitions and alliances, in a hid to become a world-scale manufacturer.

But in many other respects the Government's new policies are taking time to bear fruit. Though supplies of certain products, notably modems and telex machines, have improved significantly, equipment such as telephone sets has been slow to go on sale in large quantities and at competitive prices. Cordless telephones, for instance, sell in Britain for about £170 each—against $70 or less in the U.S.

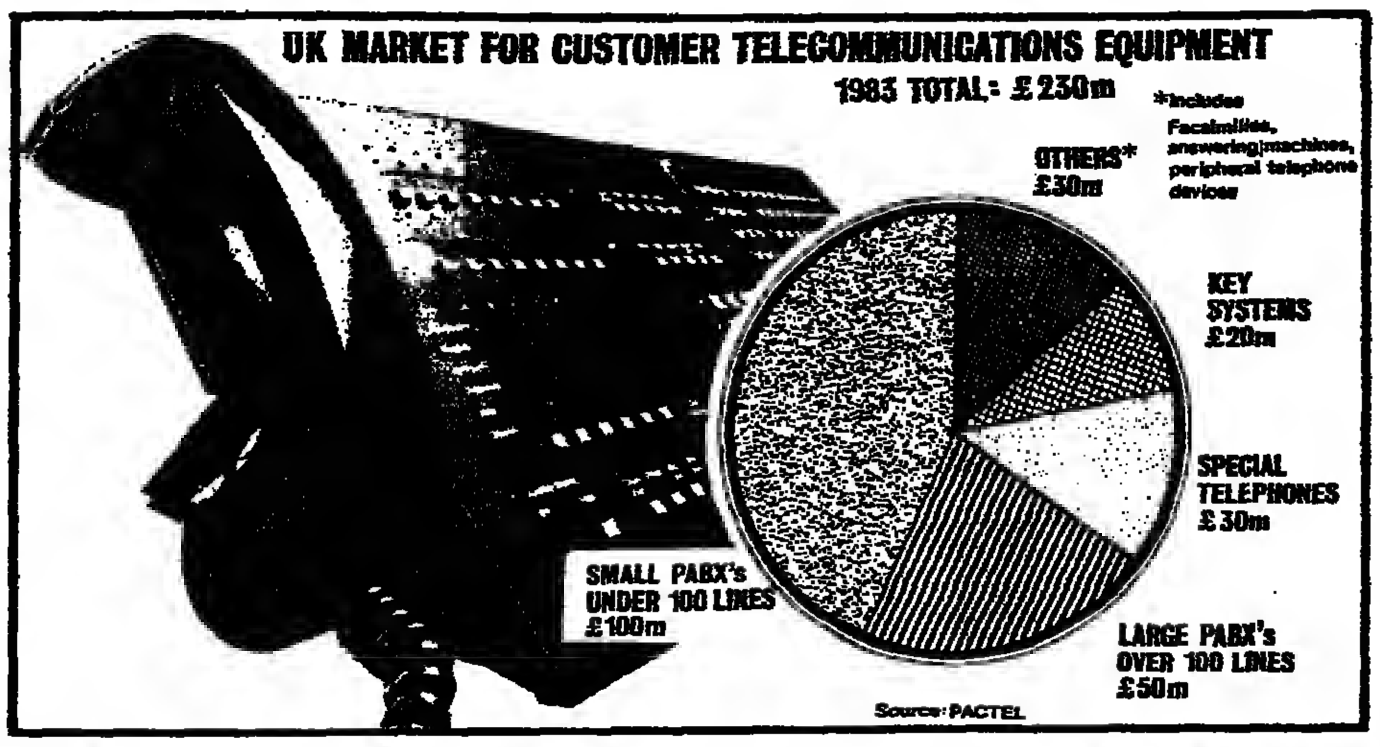
Moreover, BT faces no serious challenge as the principal UK distribution channel for subscriber equipment. Its vast purchasing power makes it a valned (and feared) customer, and many suppliers are clearly relnctant to risk its displeasure by competing directly against it in the market.

During the past two years, the Government has been forced to intervene repeatedly to prod the equipment approvals process along. Initially, and until independent procedures for writing standards and testing equipment were established, it gave BT responsibility for testing competitive products. The arrangements gave rise to considerable recrimination between BT and equipment manufacturers, the former objecting that it was overstretched and the latter complaining about foot-dragging.

The independent procedures are now in place, but by late September only one prodnct had been approved through them. All the 250-odd other items certified for competitive sale have been processed under improvised schemes operated by the Department of Trade and Industry, which has discriminated in favour of UK-based manufacturers.

Mercury, tho only company authorised so far to operate an independent communications network in competition with BT, is still in its infancy and has had to fight something of an uphill hattle to date. BT has slashed its own tariffs for long-distance transmission — the market in which Mercury expects to make most of its money—and Mercury is also having to contend with a campaign of disruptiva resistance waged by BT's main unions.

Mercury has the support of three well-heeled backers, Cable and Wireless, British Petroleum and Barclays Merchant Bank. But it seems unlikely to make much more than a small dent in BT's husiness before the end of this decade, and even in the longer term expects to capture only a modest share of the total market.



UK SUBSCRIBER MARKET: SOURCES OF SUPPLY

Equipment type	Supply	Installation	Maintenance
First telephone	BT	BT	BT
Other telephones	BT/Private	Supplier	Supplier
PABX	BT/Private	Supplier	BT*
Telex terminals	BT/Private	Supplier	Supplier
Modems	BT/Private†	Supplier	Supplier
Facsimile terminals	BT‡/Private	Supplier	Supplier
Teletex terminals	Private	Supplier	Supplier
Videotex terminals	Private	Supplier	Supplier
Mobile telephones	Private/BT§	Supplier	Supplier

Notes:
* With the exception of digital SPC exchanges installed after liberalisation.
† Modems operating at 2,400 bit/s and above.
‡ BT markets on behalf of the supplier, Siemens. It does not purchase them from the manufacturer.
§ BT Emerald markets radiotelephones.

Source: Logica.

Thus, BT, though legally deprived of its monopoly, continues in practice to tower over most areas of the telecommunications market. Indeed, one of the inherent problems in the Government's policy so far has been reconciling its desire to press BT to be more efficient and aggressive (thereby reinforcing its market domination) with the objective of encouraging a wide diversity of market participants able to compete on reasonably equal terms.

This dichtomy is likely to be further highlighted as plans proceed for the sale of shares in BT. Officially, the Government argues that privatisation is a logical extension of liberalisation. But it faces a delicate task in striking a balance between maximising the sale proceeds and the broader aims of its telecommunications policy.

BT's appeal to investors will depend critically on the regulatory framework within which it will be required to operate after privatisation. The two principal regulatory instruments will be BT's licence (to be published this month) and a formula which will peg its tariff increases for certain services below the annual inflation rate.

The licence will spell out BT's obligations to provide universal service and to continue unprofitable but socially desirable services such as emergency calls. The exact workings of the tariff-fixing formula have yet to be decided.

The Government plans to create an Office of Telecommunications (Oftel) to ensure fair competition. It will have powers to investigate abusive practices and to direct offenders to take corrective action.

BT and prospective investors would clearly prefer the lightest possible regulation, so that organisation can present itself as a dynamic stock in a growth industry. But as well as squaring that aim with the interests of ensuring fair competition, the Government must solve another conundrum. This is that the more attractive BT looks to investors, the bigger will be the task of disposing of all its shares at once.

One option would be to break the organisation up and sell it off in pieces. That was seriously considered at one point but was rejected as impractical. The major objections were that it would be hard to find buyers for the lossmaking parts (such as the local network), that it would infuriate BT's main unions and that lack of precise financial information made it almost impossible to make a sensible division of BT's assets.

BT has also convinced the Government that it must remain intact if it is to competa effectively on world markets against giants such as American Telephone and Telegraph. The organisation's senior managers argue that it can play a strategic role in tha development of Britain's information technology industry by spearheading a thrust by manufacturers on world markets.

It is still uncertain, however, whether that objective can be reconciled satisfactorily with BT's own future requirement to maximise its margins on equipment sales.

Radical in intent, Britain's new telecommunication policies are clearly proving a challenge to implement in practice. It remains to be seen whether the Government can realise all the objectives which it has set itself. It will take longer still to judge whether the experiment yields the economic and commercial benefits expected of it.

MAJOR DEVELOPMENTS IN UK TELECOMMUNICATION

A chronology of major developments in UK telecommunications policy:

September 1979: Government says that it intends to restructure the Post Office along lines recommended by 1977 Carter Committee report and to review its monopolies.

July 1980: Sir Keith Joseph, Industry Secretary, announces intention to curtail Post Office monopoly over the supply of subscriber equipment and network services and to consider competition in transmission systems.

November 1980: Government publishes Telecommunications Bill, seeking authority to split the Post Office into two separate organisations, one dealing with posts and the other (British Telecom) with telecommunications.

The Bill would give the Government wide powers to licence private competitors to supply, instal and maintain subscriber equipment and to supply network services. Government would also be authorised to licence competition in network services and provision of circuits.

Responsibility for approval and certification of subscriber equipment to be transferred in stages from the Post Office to independent bodies.

April 1981: Government publishes independent report by Professor Michael Beesley of London Business School, on network services. It calls for wide freedom for private sector to lease capacity and offer "value added" services on British Telecom's domestic and international circuits, and for approval of competitive transmission networks.

June 1981: Cable and Wireless, Barclays Merchant Bank and British Petroleum announce joint plan to build and operate an independent national communications system to be called Mercury.

July 1981: Government announces intention to allow private suppliers to offer "value added" services on British Telecom's networks but rules out straight resale of bulk circuit capacity.

October 1981: Post Office formally split into two parts and telecommunications liberalisation programme formally begins. British Telecom is to test and approve competitive subscriber equipment on an interim basis until new technical standards are written by British Standards Institution and procedures for certification by the British Electrotechnical Approvals Board are established.

November 1981: Government steps into speed up competitive sale of subscribers equipment by setting up its own special certification programme and allowing free supply of telephones already available from British Telecom. It also announces formal timetable, calling for full liberalisation of all equipment by July 1983.

February 1982: Mercury consortium receives licence to build and operate independent communications network.

June 1982: Government announces plans to licence two competitive networks to operate cellular mobile telephone services nationally from 1985.

July 1982: Government introduces White Paper proposing sale of 51 per cent of British Telecom to private investors and creation of an Office of Telecommunications (Oftel) to regulate the industry.

October 1982: Hunt Committee recommends liberal policy to encourage the development of privately financed multi-channel cable television systems.

Recommendation

February 1983: Government accepts recommendation of a report by Professor Stephen Littlechild that, for the first five years after privatisation, British Telecom's tariff increases for selected services be pegged below the inflation rate.

Government also announces intention to abolish British Telecom's monopoly over its customers' telephone and to allow resale of British Telecoms circuit capacity for voice telephony. It agrees to consider increased competition in international telecommunications and satellite services.

April 1983: Mercury telecommunications service launched, initially in City of London area.

April 1983: Government announces outlines of cable television policy, providing for creation of a regulatory body and laying down broad standards for good taste and advertising. British Telecom and Mercury to have exclusive rights to link local cable systems and provide voice telephony via cable. Twelve interim franchises to be granted by year end before passage of legislation.

July 1983: Legislation to authorise sale of British Telecom reintroduced in largely unchanged form following general election. Government pledges to offer British Telecom to investors as a single entity and aims for flotation in autumn 1984. British Telecom's licence to be published before the end of this year.

Cable and satellite technology opens up ever-widening new horizons

A boon for business services

SATELLITE TECHNOLOGY is flying high in the UK telecommunications market. Satellites already in orbit, and others much more powerful to be launched in the next few years, will help to meet the continuing increase in international traffic.

They will also encourage an expansion of specialist business services such as facsimile transmission and video-conferencing and provide extra back-up for the terrestial system during a period of transition to an optical fibre network.

By RAYMOND SNODDY

Satellites will also feed pictures to the headends of new cable networks and will enable the BBC to launch a direct broadcast by satellite (DBS) service to homes scheduled to begin in 1986.

For Mercury Communications, which has been given the task of being a private sector competitor of British Telecom, the flexibility and speed of satellite links should make it a littla easier to establish itself in the market place.

Satellites have become increasingly important for UK telecommunications across the Atlantic and to other parts of tha world because relative costs of satellites and undersea cable have moved much closer together.

The launch and equipment costs of satellite may be high, but the extra power and channel capacity on modern "birds," BT says, is beginning to make the costs compatible with submarine cable. Cable, bowever, has a design life of 25 years as opposed to around seven for a sateilite, and is more secure.

Intelsat, the international satellite organisation, has a total capacity of abont 25,000 two-way telephone circuits of which Britain's share is around 6,000 circuits. Use is growing at the rata of 21 per cent a year.

Because of this growing traffic five new telecommunications satellites costing more than £350m were ordered last year.

The new Intelsat VI salellites, due in service hy 1987, will each be able to carry 33,000 phone calls at once as well as several television pictures.

In Europe, the European Communicatioo Satellite (ECS) series—the first of whicb was lauoched successfully in June by the European space rocket Ariane, wil also provide an extension of services for telephone, television and specialised commercial services.

According to a recent survey of the European telecommunications market by Logica, approximately one-third of all intra-European circuits exceeding 800 kms will be carried by ECS by 1986.

Although such satellites will clearly give British Telecom a great deal of security and flexibility in meeting the rise in demand for international phone lines BT is also pinning a lot of its hopes on an expansion of business services.

BT hopes to launch its new SatStream service, which will offer users digital links betweeo their offices in the UK and Europe, in the middle of next year.

The service will use satellite capacity on both the European Communication Satellite and the French domestic satellite Telecom I. Internal company speech, facsimile, video-conferencing and high-speed data will all be sent in a singla digital stream and picked up on small dish receivers on the roofs of corporato headquarters.

Trials have already been held between the Financial Times' London headquarters and the printers of its international edition in Frankfurt. BT believes the SatStream service will be the first nf its kind in Europe.

"It is a totally new service, so there is no demand because the product does not exist yet," BT said.

The organisation believes that the potential, however, is great. Independent market research has indicated significaot demand for such European business satellite services using small dish earth stations.

The outlook from the U.S. so far is not all that encouraging. Several carriers in the U.S. have alreadly overestimated the speed with which what is technically possible in the provision of business services can become financially viable.

For example, Satellite Business Systems (SBS)—a joint venture between IBM, Comsat and the Aetna insurance group—hoped it could make most of its money by beaming computer data via satellite to dish receivers on the roofs of customers' offices.

Ironically, the company has had to diversify into less futuristic service—including a long-distance telephone service.

BT plans a joint venture with SBS to provide high-speed data links between the U.S. and Britain using Intelsat transponders. The plan has run into difficulties because SBS has not yet received the authorisation needed to be an international carrier from the Federal Communications Commission.

UK Satstream dish-aerial on North Sea oil rig

BT's membership—with GEC-Marconi and British Aerospace—in the Unisat consortium due to build the BBC satellite broadcasting system will also increase its business data capacity.

The salellito will have two spot beams, one focused on Europe and one on America, allowing transatlantic communication.

For BT, with an established terrestial telecommunications notwork covering a relatively small country the thrust of its effort in the new technologies of satellite and cable is largely international.

But in Britain BT will be leasing existing transponder capacity on behalf of programme providers wanting to use low power satellites to distribute their programmes to local cable operators.

The situation here, however, was changed recently by the decision of Mr Leon Brittan, the Home Secretary, to allow independent television to havo two DBS channels.

Companies outside the traditional structure of independent television can apply for franchises and Goldcrest Films and Television, which has put together a premium movie channel consortium, for example, has expressed an interest in bidding for DBS capacity.

BT is also likely to be the cable network provider in a number of the pilot franchises due to be announced by the Government some time in November.

The multi-channel cables used to carry programming and interactive services into the home are however unlikely to carry BT's normal telephone traffic in the foreseeable future. The existing telephone wires, wrapped up in a separate plastic cover, will continued to be used.

Tha view of satellite and cable for domestic voice service is rather different at Mercury, the consortium put together by Cable and Wireless, British Petroleum and Barclays Merchant Bank.

Mercury hopes to make an early entry into the transatlantic trade on Intelsat V and has ordered an 18 metre receiving dish from Marconi.

Planning permission has been applied for at several sites. The favourite at the moment is an old quarry in Oxfordshire. The site has the dual attractions of obscuring the visual impact of the dish for local people while protecting the equipment from microelectronic interference.

The company is also keeping a flexible approach to the use of satellite to bring its telephone services to cities such as Glasgow. Satellites may be used to bridge the gap until the main fibre optic trunk routes planned to link Britain's major cities are in place.

A number of applicants for pilot cable franchises are believed to have written in Mercury as a telephone operator in their applications to the Government.

Should any of those applicants be successful in being awarded one of the 12 pilot franchises, Mercury plans to send a portable satellite receiver dish to the area. This would enablo a rudimentary telephone service to be established at least in a few areas within 12 months.

Mercury would like to use the expansion of cablo as a relatively easy way of setting up a local telephone network. Voice and data communication would be offered as an optional extra on top of entertainment television with subscribers at least initially having to install another telephone as well as their BT receiver.

Mercury plans to offer local cable operators "distributorships" for local telephone services. This could include the right to sell telephones and other equipment.

Mercury studies suggest that the addition of telephone service would enable many cable operators to break even more quickly and, it is claimed, could contribute as much as 30 per cent of net profits after 10 years.

Away from the impending commercial battlo between BT and Mercury a number of companies are already offering specialist services by satellite.

Visnews, the international television news agency recently aoaounced a joint venture with British Telecom International and Western Union called Bright Star. It gives Visnews its own transatlantic satellite link.

In a similar move earlier this year, though for data and documents rather than television pictures, a London subsidiary of the U.S. printing company, R.R. Donnelley, introduced a satellite service. It was primarily intended for the transmission of time-sensitive documents, but is also used to send the Economist magazine to printers in the U.S.

Privatisation has meant a major reorganisation in management structure, says **Jason Crisp**

British Telecom: radical changes ahead

AFTER DECADES of cautious evolution British Telecom has been shaken to its bureacratic core by a number of radical changes that have been forced upon it mainly by the Government. Only its U.S. counterpart, the giant American Telephone and Telegraph, could claim to be undergoing more dramatic changes.

In the past four years, the old Post Office has been split into telecommunications and mails with Giro.

The telecommunications arm, renamed British Telecom (BT), has been stripped of its statutory monopolies, is implementing a major internal reorganisation and now faces privatisation in the largest-ever sale of state assets in the UK.

The prospect of privatisation has provoked a series of labour disputes with its largest union, the Post Office Engineering Union (POEU).

As a result of competition and privatisation, BT has begun a major re-organisation of its management structure. And it has been rapidly introducing new products and services, and been rebalancing tariffs to deter potential competitors.

In addition, it has become a much more cost-conscious purchaser and has started, slowly, to reduce the number of staff in its bureaucracy.

Since the Conservative Government was first elected in 1979, it has made British Telecom the subject of two major pieces of legislation, the British Telecom Act 1981 and the British Telecommunications Bill which is just entering the committee stage.

The original legialation began comparatively modestly with a proposal to split up the Post Office and to liberalise some of the telecommunications monopolies.

The original plan to split the Post Office in two had originally been proposed in the Carter report. The liberalisation stemmed from frustration at the extraordinarily poor aervice from BT, partly a hangover from labour disputes, and an admiration for tha developments in the U.S.

But even as little as three years ago, BT top management did not believe it would ever face compeition with its basic network, which like many other telecommunications authorities around the world it believed was a natural monopoly.

But gradually that argument was lost and the Department of Industry licensed a single network competitor, Mercury a consortium of Cable and Wireless, BP and Barclays Merchant Bank.

Scarcely had that blow—in BT's minds—settled in when it became clear that the Conservative Governmant was rapidly becoming attracted to the idea of extending the sale of state assets to include BT.

These external changes have forced BT to make a number of internal changes in order to respond to new challenges.

Sir George Jefferson, who became chairman of BT in September, 1980, has used the external changes to justify much needed changes in the organisation's bureaucratic structure which originated from when it was part of the civil service.

Major task

Sir George Jefferson has frequently said that his major task at BT is to manage change.

When he joioed, there was effectively one profit centre at BT, the chairman's office and, in the traditional manner of bureaucracies, decision making was always pushed upwards through the organisation.

BT is trying to reverse this trend and push decision making back towards the relevant level. BT is in tha process of introducing profit-centres in much smaller groups.

In 1981, BT was divided into four main divisions: Inlaod Division which runs the telephone service within the UK; International Division, which is responsible for all internatiooal communications; Major Systems, which buys the main switchiog and transmission systems and is responsible for research and *development; British Telecom* Enterprises (BTE), responsible for customer equipment and services.

● **Inland Division.** This, in turn, has been divided into two, "National Networks" and "Local Communications Services."

National Networks is responsible for the inland trunk network and for specialised services such as leased lines and a range of new digital services such as Kilostream and Satstream. Local Communications Services looks after the local networks and the 61 local areas are being turned into profit centres.

● **British Telecom Enterprises, consisting of four independent profit centres:**

● Consumer products: As part of its response to competition BT now sells telephooes—previously they could only be rented. BT has extended its *range of products*, including the first legal cordless telephone to be available in the UK.

BT has also introduced plugs and sockets as part of the liberalisation process which also enables other veodors of telephone instrumeots to be readily connected to the oetwork. It has also set up a number of retail outlets from its own phoneshops to major chains, such as Boots and Greens.

● Merlin, which sells equip*ment to business. Products* include PABXs, teleprinters and wordprocessors. Merlin is to take British Telecom into the oew markets for office automation equipment.

● Information Services, which includes Yellow Pages directories and Prestel, BT's viewdata (videotex) service.

● Spectrum, which offers a range of value-added services, one of the few areas where BT faces competition and does not already dominate the market.

Spectrum, formed at the end of *1981, took over BT's existing* radiopaging and mobile radio services. New services being introduced include an electronic mailbox, a telephone answering service, and security services.

● Major Systems. The division is the major purchasing division of BT and is responsible for buying main exchange and transmission equipment. One of the most significant changes in BT, as a result of liberalisation and with the prospect of privatisation, is a *tougher approach* to procurement.

Competitive pressures means that BT is gradually becoming less reliant on its traditional suppliers and is much tougher on prices. Although it still has a buy-British policy it is more willing to look overseas than before.

The most dramatic example was a change in ordering of *System X, Britain's digital* public exchange system.

For many years, the development had been a four-way project between BT's research labs at Martlesham and the three traditional main suppliers, Plessey, GEC-Telecommunications and Standard Telephones and Cables.

Considerable delays and mounting costs resulted in bitter recriminations. Major Systems—after considerable government involvement—reorganised System X development.

Plessey was made lead company for the development of System X, with GEC as a subcontractor. STC was dropped but awarded a large and highly profitable contract for TXE4A, an earlier generation of exchanges.

At the same time, BT hinted that it would consider buying *up to 30 per cent of its requirements* for main exchanges from other suppliers if the British campanies failed to deliver on time and at the right price.

It is not clear at this stage how serious a threat this is. But a number of companies would be exceptioaally keen to capture part of the UK market.

Joint venture

The leading conteoders are thought to be: LM Ericsson of Sweden which has a joint venture in the UK with Thorn EMI, knows the UK well and has supplied to large international exchanges to BT. Northern Telecom, the Canadian company which has recently announced a major investment in the UK and has sold exchanges to AT&T in the U.S., STC, with ITT's System 12 and possibly Philips/AT&T *with 5ESS.*

● British Telecom International: By far the most profitable part of BT. The division is responsible for all international activtiies from atellite communications to international telegrams.

To date, BT has faced little effective competition. Comparatively little new telecommunications has come onto the market, partly because most of the UK companies in the field depend upon BT as one of their major customers. Mercury, the new network, is scarcely in operation, with just a handful of microwaves communications links in London.

In preparatioo for Mercury, BT has cut the tarriffs on a number of husy intercity routes where there is a high volume of traffic. And earlier this year BT also cut the rates on international calls.

BRITISH TELECOM (Year ending March, 1983)	
Turnover	£6,377m
Retained profit	£365m
Capital investment	£1,596m
Return on capital employed at replacement cost	5.8 per cent
Borrowings	£3,395m
Research and development	£172m
Telephones	28.45m
Exchange lines	18.96m
Employees	245,976

BT now is preparing itself for privatisation. The Government inteods to sell 51 per cent of BT's equity next autumn, *for it is widely held to be about* £4bn. It will be the largest-ever sale of state assets by the Government.

In the last financial year, BT madé a pre-tax profit of £365m, after supplementary depreciation of £626m, on a turnover of £6.37bn.

As part of the privatisation process, BT will be granted a licence to operate the UK telecommunications service. This licence will estahliah BT's commitments to provide un*profitable services* such as public call hoxes, emergency services and in rural areas.

As a result, BT is now streouously negotiating with tha government about the requirements of the licence, the rescheduling of its deht and a number of other commitments necessary before it can become a public company.

Effect of liberalisation of transmission and network services

Customers benefit from wider choice

ONE OF the most radical results of the British Government's liberalisation of telecommunications has been Mercury, the private sector company which is to challenge British Telecom with a rival telephone network.

Mercury is a joint-venture established by three blue chip British companies, Cable and Wireless, BP and Barclays Merchant Bank. Mercury has a 25-year licence to run an alternative telecommunications network in the UK and there is no immediate intention to allow any other companies to compete.

The Government granted a licence to Cable and Wirless on behalf of Mercury in February 1982, after months of haggling about the conditions.

Since then, Mercury has had a painful birth. British Telecom swiftly responded with some pre-emptive actions before Mercury had signed its first customer. BT cut trunk charges on busy routes and announced the widespread introduction of digital links for business.

And British Telecom's main union the Post Office Engineering Union (POEU) has begun an increasingly tough campaign against Mercury and its main shareholders as part of a larger protest against both liberalisation and privatisation.

By Jason Crisp

Mercury has also had to review its original strategies in order to find a significant customer base. The original idea for Mercury was to provide a highly sophisticated, all-digital network of leased lines to provide the latest communications facilities for large businesses in the UK.

When the venture was first formed there were exeeptionally long delays in the provision of private circuits from BT. At that time BT had no apparent intention of introducing new services other than at its own convenience.

As a result of BT's aggressive response and a growing commercial awareness within Mercury there have been some major changes in its marketing and business plans:

● It has radically speeded np plans to introduce switching into its network. This will greatly widen its appeal and open up a much larger market than the relatively small one for private circuits.

● As a result Mercury will also start selling to much smaller organisations than the original plan which was to concentrate on large companies and government bodies.

● The Government move to encourage the massive expansion of cabla TV in the UK has given Mercury a major new opportunity for gaining local networks.

Only BT and Mercury will be allowed to carry telephone conversations on interactive cable systems. Mercury should benefit in two ways from cable. One, as a trunk carrier of programing material. Second, and most important it can enter the residential telecommunications market.

● Mercury has accepted that demand for voice traffic will exceed that of sophisticated data services. And as a result, it is taking a more flexihle approach to the technology and marketing.

● It also plans to expand its geographic coverage more quickly. It can do this to a very limited extent by leasing short circuits from BT. But Mercury also has an option on an East facing transponder on an Intelsat V communications satellite over the Atlantic which will give it a complete geographic coverage.

● Another very important change for Mercury occurred in August when the Government said it could offer switched international services. Until then Mercury could only offer leased lines to overseas countries—in other words, a company using Mercury's services could only be linked to one organisation overseas for each leased line.

The original delay to the licence had centred on this crucial point. International traffic will be one of the keys to Mercury's profitability, as it is for many telecommunications authorities.

The investment in Mercury has already passed £60m and the service has barely begun. By the end of next year it is expected to have reached £250m and it will carry on needing large sums of capital for many years.

Mercury's first major investment is to build a figure of eight loop of optical fihre cahle joining London, Bristol, Birmingham, Manchester, Leeds and Stoke.

The optical fibre is being laid alongside British Rail's tracks. The figure of eight network is expected to be completed in 1984, using a combination of microwave and optical fibre. The complete optical fibre route is expected to be finished in 1985.

British Telecom's response to Mercury has caused some wry amusement among its users who complained for years about its unwillingness to provide the advanced digital services they wanted.

BT has launched a new range

CONTINUED ON NEXT PAGE

WESTERN EUROPE: Despite the high price paid, telecommunication markets remain highly fragmented along national lines

Monopolies face new challenges

CONTINENTAL EUROPE'S patchwork system of fragmented national telecommunications markets dominated by powerful telecommunications monopolies, which has remained largely intact for most of this century, is being put to the test. The way in which the challenges before it are tackled is likely to have important consequences for Europe's future ambitions in world information processing markets.

Telecommunications has long been considered a "natural" state monopoly in most European countries, similar to posts and railways, on the grounds that it was a vital public service. The over-riding objective until recently bas been to extend that service on equal terms to as many customers as possible.

BY GUY DE JONQUIERES

But such policies today confront radically changed circumstances. Not only has a high level of penetration heen achieved for basic telephone service in most of Western Europe; but rapid technological developments are turning telecommunications into a strategic industrial resource and a battleground for international competition.

National telecommunications authorities (PTTs) face increasing demands from their customers to supply an ever wider choice of sophisticated services, such as data communications, and are spending heavily to modernise their networks hy installing digital switching and transmission instead of analogue technology and by replacing copper wire with optical fibre cable.

A recent study by Logica, a British computer services group, estimates that annual investment by PTTs in the seven largest European countries is running at about $15bn. It forecasts that this figure will rise by about 50 per cent in real terms over the next five to 10 years.

"Every Western European country will be obliged to undertake the massive initial investment in these new networks—or risk losing its place in the ranks of the advanced national economies," the study says.

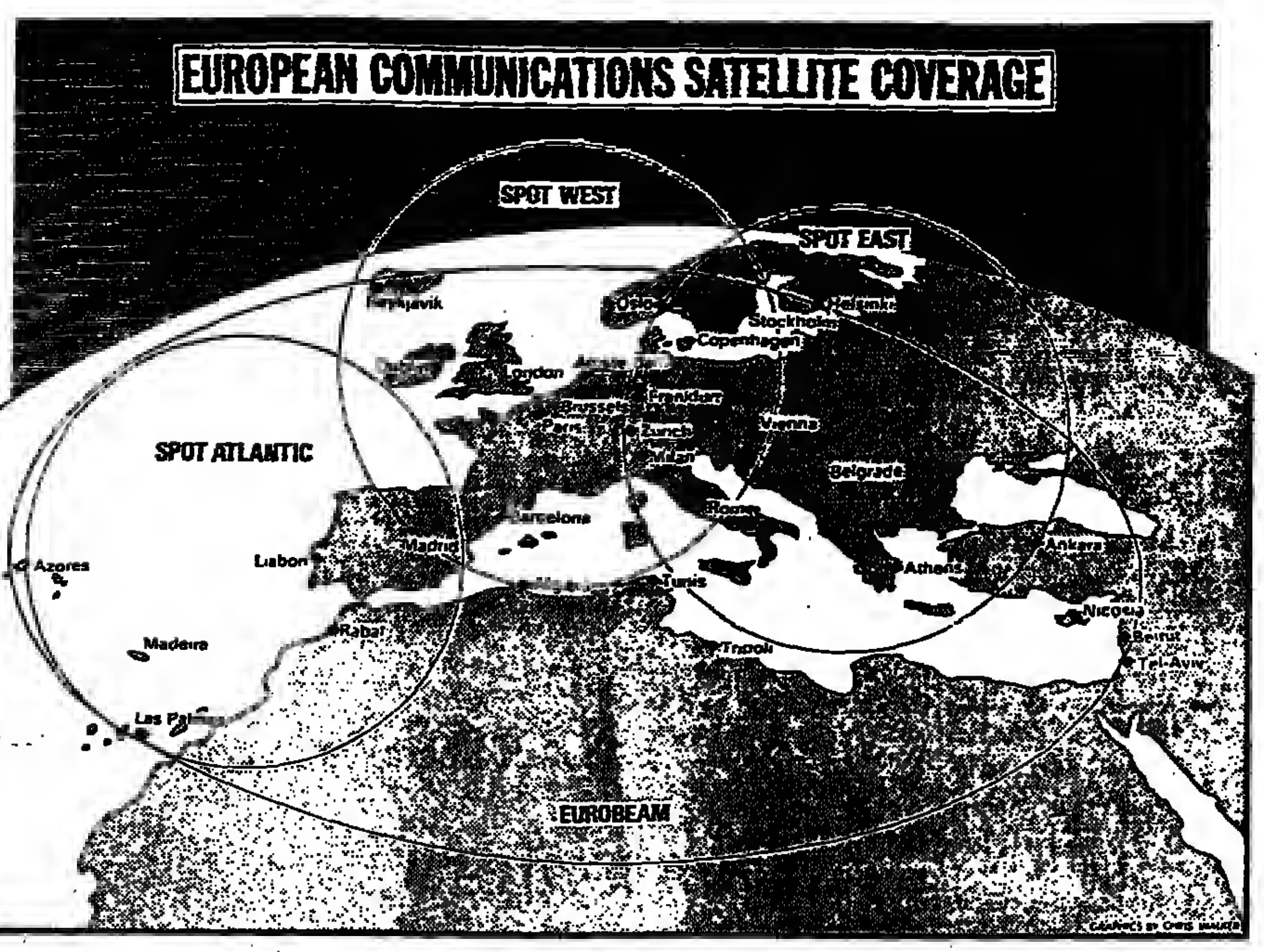
In many European capitals, these investment programmes are also being viewed increasingly as vehicles for encouraging dynamic national high technology supply industries.

France, for instance, has sought to use its huge network modernisation effort which has been under way since the mid-1970s to underpin the development by manufacturers of inexpensive bome terminals and other equipment needed to operate two-way electronic information services.

In West Germany, the Bundespost (Post Office) is sponsoring pilot broadband local cabling systems, designed to carry full video communications as well as data and voice, in several cities. One of the goals is to belp domestic manufacturers gain more experience in technologies sucb as fibre optics and opto-electronics.

An important motive hehind these initiatives is the desire to increase the ability of telecommunications manufacturers to compete on world markets. But international competition is a pbenomenon for which continental PTTs have until recently shown little enthusiasm on their home territory.

Europe's telecommunications markets remain highly fragmented along national lines, protected by PTT procurement policies which have strongly favoured local suppliers and by a variety of imports. As a result, most European countries have managed to achieve self-sufficiency—and in a number of cases—an export surplus in telecommunications equipment. That contrasts with the sizeable deficits which most run on the much less restricted trade in data processing products.



But a considerable price is paid for these nationalistic policies. One effect has been to keep equipment prices high: a study by the Organisation for Economic Co-operation and Development, published last year, found that public switching equipment in the U.S. cost only about one-third to one-half of the average in Europe.

Furthermore, restrictive PTT approval procedures are blamed by critics for retarding the introduction of innovative products. Nixdorf, the West German computer manufacturer, has complained that the Bundespost took so long to certify a voice and data terminal which it developed a few years ago that it had lost its competitive edge by the time it could be sold.

Siemens, also of West Germany, has developed a private exchange (PBX) in the U.S. which is considered by experts to be technically well in advance of the products which the company sells at home.

Industrial collaboration and technical harmonisation in Europe have also been beset by nationalism. Though European PTTs have all embraced the goal of developing integrated service digital networks (ISDN), they are adopting technically different methods to achieve it.

The divergences have emerged even more clearly in their approach to the new generation of cellular mobile radio services: failure to agree on a common standard means that by the late 1980s, at least three different and incompatible types of system are likely to be operating in Europe.

As a result, there will not only be practical inconvenience for users but also a fragmentation of the market for terminals, which will reduce economies of scale in production.

The EEC Commission has recently launched a campaign to try to achieve greater harmonisation of telecommunications policies and markets in the Community. It has warned that failure by the Ten to achieve more common ground will both impede the modernisation of the telecommunications infrastructure and weaken European industry's ability to compete with U.S. and Japanese manufacturers.

The Commission has set out a list of fairly broad goals, which it hopes will be backed by EEC heads of Government in December. They include steps to co-ordinate national medium- and long-term policy objectives, to achieve more technical standardisation, to adopt a common stand on external trade and to liberalise public procurement.

Even if the Commission receives a fair wind from the heads of Government, it faces some fairly tough obstacles. The PTTs are accustomed to the long traditions of autonomy and guard their independence jealously. Many are also bound by close, and mutually-reinforcing, alliances with their favoured national equipment suppliers, which have little incentive to see their protected home markets opened to wider competition.

Signs of change

But there are, nonetheless, some signs of change. In a number of countries, including West Germany and France, the PTTs have relaxed their monopoly over the supply of subscriber equipment such as telephones and PBXs. They continue, however, to control the approvals process and to discriminate against foreign manufacturers.

Some experts believe that the PTTs will be forced also to allow more private competition in the provision of "value added" network services such as electronic mail. Logica argues that the PTTs may find it impractical to maintain a monopoly over all the wide range of services which technology is now making possible, particularly the more specialised ones for which there is only a small number of customers.

But probably the single most important force for change lies in the difficulty of reconciling the PTT's own desire to obtain better value for money in their procurement with the powerful economic pressures which are starting to reshape the structure of the world telecommunications industry.

In the past few years, financial considerations have led PTTs in a number of countries to introduce competitive bidding for major purchases, such as public switching orders, in place of the traditional system of cost-plus contracts.

In certain cases, notably France, the domestic industry was deliberately reorganised to create two or more manufacturers able to bid for such orders.

But as the costs of developing new generations of sophisticated telecommunications equipment have soared, it has become increasingly difficult for European countries to sustain more than one world-class manufacturer. The minimum investment needed to develop a new digital public exchange family today is about $500m—a sum which can only be recouped through large orders.

Faced with this problem, PTTs are starting to look beyond their traditional suppliers. In West Germany, the Bundespost has recently given its approval to ITT's System 12 public exchange, as well as to Siemens' rival EWS-D system.

In France, where Thomson's huge losses have recently prompted the Government to agree to a merger of its telecommunications business with that of its main rival Compagnie Generale d'Electricite, there have been suggestions that up to 30 per cent of the public switching market might be opened to foreign manufacturers in the future.

Opportunities

And in the UK, British Telecom has let it be known that it will consider bringing in a competing supplier if production of System X by Plessey and GEC does not meet its standards.

These developments could create new opportunities for European manufacturers to sell into each other's markets and to form industrial alliances. Several have expressed an interest in partnerships and collaborative ventures, notably CIT Alcatel, the telecommunications subsidiary of Compagnie Generale d'Electricite.

But they will have to move fast if they are to reap the potential benefits and fulfil the EEC Commission's hopes of building a stronger European industry.

Many powerful non-European manufacturers are poised to exploit any opening in the market and several—notably American Telephone and Telegraph, ITT, and Northern Telecome of Canada—have already got a foot in the door.

European PTTs: INVESTMENT PROGRAMMES

Country	Total annual investment	Exchange rate (units/$)	Investment in $	Investment per inhabitant†	Sources of funds
UK	£1,590m in 1982-83	0.645	$2,460m	$44	88.8% internal in 1982; balance mainly from government funds; very limited open market borrowing
The German FR	DM 14,900m in 1983	2.55	$5,843	$95	42.8% internal in 1981; balance on the open market subject to government approval
France	FFr 27,000m/yr 1983-85	7.68	$3,520m	$65	About 80% internal; balance on the open market through specialised institutions
Italy	4,170bn Lira in 1983	1,510	$2,760m	$49	Internal funding was very low but has now risen to about 50%; balance on the open market
Sweden	4,250m Skr in 1981-82	7.63	$557m	$67	85% internal; balance from government funds; Teleinvest borrows on the open market
Spain	About 110bn Ptas/year	143	$769m	$20	45% internal in 1981; balance on the open market, including overseas loans.
Netherlands	Fl 1,600m in 1982	2.85	$561m	$39	Funding government controlled

† 1981 population numbers. Source: Logica.

WEST GERMANY: Bundespost invests heavily in new services

Bildschirmtext has 'vast potential'

THE CONSUMER society is alive and well in West Germany, judging by the huge crowds flocking recently to the audio-video exhibition in West Berlin and the automobile show in Frankfurt. The Germans have been careful about spending lately owing to a bout of queasiness caused hy a cyclical downturn in the economy—but they have not lost their love of gadgets and glimmering cars.

All of this is encouraging to a man such as Herr Christian Schwarz-Schilling, the Post Minister, who is a fervent advocate of technological advance to meet consumer and business needs. As fast as he possibly can, he is pressing ahead with a wide range of communications projects aimed not only at inspiring and satisfying new consumer tastes but also at stimulating economic development.

A man with a flair for publicity, Herr Schwarz-Schilling used the occasion of West Berlin's audio-video exhibition to proclaim the launching of viewdata, or Bildschirmtext as it is known in West Germany. The service, which enables subscribers to call up textual data on a television screen via a telephone, has undergone trials in Düsseldorf and West Berlin since 1980 and now is to be progressively extended nationwide.

The Minister is confident that Bildschirmtext, as well as cable TV, will prove popular, meeting latent demands and creating jobs and investment in the process. Both services are part of a concept of an integrated system of voice video and data transmissions being vigorously promoted by the Bundespost, West Germany's postal and telecommunications authority.

The Bundespost's projects were already well under way before Herr Schwarz-Schilling came to power as a Minister in Chancellor Helmut Kohl's centre-right Government a year ago. But whether by accident or design, be has shown a remarkable talent for controversy and bas given projects public prominence and a new sense of urgency. The Bundespost, a vast bureaucracy of half a million employees, manages more than ever before to convey a sense that things are happening—which is no mean feat.

Cast aside, if not forgotten, are emharrassing memories of the telecommunication industry'a costly but abortive plans for introducing new telephone switching technology in the 1970s. The system then developed—to replace the existing electro-mechanical switching—was given trials in some cities and initial problems were ironed out. But the system was abandoned in 1978 as obsolete in view of rapid developments in digital telephone technology.

The Bundespost later issued suppliers with specifications for a fully digital exchange and has been moving steadily closer towards giving the green light for volume production. Bundespost engineers have given lengthy tests to digital exchanges produced for local and trunk traffic.

Optimism

Siemens, at the request of the Bundespost, recently submitted a detailed offer for series production of digital exchanges. Standard Elektrik Lorenz (SEL), a subsidiary of ITT of the U.S., has received a similar request and has voiced optimism about obtaining production orders. "We expect to supply a significant share of the Federal Republic's digital switching needs over the remainder of the century," Dr Helmut Lohr, SEL's chairman, remarked recently.

The progressive introduction of such exchanges will facilitate plans to incorporate a wide range of transmission services in a single integrated services digital network (ISDN). As part of this scheme, the Bundespost is also pushing ahead with plans for laying copper cable throughout the country—and later optical fibre cable, which will open the way for, among other things, two-way video communications between households.

One of Herr Schwarz-Schilling's first acts as a Minister was to increase the hodget for cable laying from DM 400m to DM 1bn a year. He has justified this on the grounds that it will not only speed np the spread of new services such as cable TV but also help lift the economy out of recession. The Minister has argued that it is not yet feasible to emhark on an optical fibre network but be is determined not to wait until it is.

Broad-band optical fibre, which offers prospects of a wider range of transmission than copper cable, is to be tested in a programme whose lengthy German title has given rise to the symbolic acronym BIGFON. Under this project, whose origins date back to 1981, the Bundespost is meeting half the DM 300m cost of industry's efforts to connect selected households in seven cities and to explore operating problems. The tests, to last until 1986, are to be carried ont in Hamburg, Hanover, Düsseldorf, Stuttgart, Nuremberg, Munich and West Berlin.

Herr Schwarz-Schilling has given an assurance that the Bundespost will order 1m kilometres of glass fibre cable between 1985 and 1995. In preparation for this, five companies plan a joint operation in West Berlin to produce 100,000 km a year from the end of 1984. The companies are AEG-Telefunken, Philips of Germany, SEL, Kabelmetal Electro and Siecor, a Siemens subsidiary.

The Bundespost has also embarked on a space satellite programme for transmission from 1987 of radio and TV programmes, plus other data, linking up with its cable network. This project is to be carried out by a consortium involving Siemens, SEL, Messerschmitt-Bölkow-Blohm and ANT Nachrichtentechnik (the former AEG division, now owned by Mannesmann, Bosch and Allianz Insurance). Two satellites—one a reserve—are to be launched, while a third will be kept on the ground as a replacement if necessary.

With the cabling of West Germany going ahead more rapidly than originally planned, there is stronger momentum for the pilot projects to test cable TV. These projects are planned for Ludwigshafen, Munich, Dortmund and West Berlin. They have been the subject of long and emotive debate over the issues of commercial control of TV and increased TV advertising. Although the first of the test projects is due to start up at the end of this year, many doubts still surround cable TV, not least about its financial prospects.

Even Bildschirmtext, despite its enthusiastic launching recently, still contains many uncertainties. The Bundespost has invested heavily in the service and hopes it will prove a revenue earner soon. It has a target of 1m subscribers by the end of 1986, by which point it will have invested a total of DM 500m in the service.

The Bundespost points out the vast potential of Bildschirmtext, including home banking. But its success will depend on whether householders can be persuaded it is both fascinating and useful and whether businesses are prepared to invest in its services.

W. GERMANY SUBSCRIBER MARKET: SOURCES OF SUPPLY

Equipment	Supply	Installation	Maintenance
Switching equipment	Manufacturer	DBP/supplier	DBP/supplier
Transmission equipment	Manufacturer	DBP (normally)	DBP
Telephone handsets	(i) DBP (1st phone) (ii) DBP/manuf (other)	(i) DBP (ii) DBP/supplier	(i) DBP (ii) DBP/supplier
Simple extra telephone equipment	DBP*	DBP	DBP
Telephone answering machines	Manufacturer	Supplier	Snpplier
PABXs	DPB or manufacturer	Supplier	Usnally supplier
Modems	DBP†	DBP	DBP
Telex terminals	Manufacturer	Supplier/DBP	DBP
Facsimile terminals	DPB or manufacturer	Supplier	Supplier
Teletex terminals	Manufacturer	Snpplier	Snpplier
Videotex terminals (planned service)	Manufacturer	Supplier	Supplier
Radiophones	Manufacturer	Snpplier	Supplier
Radiopagers	Manufacturer		

* OBP: Oeutsche Bundespost. † Except for modems used on international leased circuits. Source: Logica.

SOURCES OF BUNDESPOST REVENUE (PER CENT)

	1950	1960	1970	1980	1981	1982
Postal services	48.2	43.4	33.3	28.3	27.6	29.4
Banking services	1.6	4.1	3.9	4.2	4.6	4.3
Telecommunications	50.1	52.4	62.8	67.5	67.8	66.3
Other	0.1	0.1	—	—	—	—

Suppliers boon

In the meantime, however, Bildschirmtext is proving a boon to equipment suppliers. For instance, ANT — most of whose communications equipment and systems go to the Bundespost—has supplied 80-000 modems, which are to form a link between subscribers' TV sets and telephones. A similar order went to Philips' TeKaDe subsidiary.

Equipment suppliers and the Bundespost itself are anxious to promote other new telephone devices and data transmission services. With 23.4m telephone lines installed in West Germany at June 30 (and over 31m handsets), the market for telephone connections seems to be approaching saturation point. The Bundespost is therefore looking to new services as a source of revenue. As it is, telecommunications provide more than 60 per cent of revenne and profits in this sphere offset losses in postal and banking services.

The Bundespost has built up a strong telex network, with 152,600 machines installed by last June 30. It is actively promoting telefax and teletex, is looking at ways of expanding mobile radio and is considering the cordless telephone idea.

With annual investment running at nearly DM 15bn, the Bundespost is a key purchaser. While there have been some suggestions that it may look more to world markets for equipment, Herr Schwarz-Schilling has specifically stressed the need to help West German suppliers keep in the forefront of technology and secure export sales.

A third of the West German telecommunications industry's production is exported, the Minister has pointed out, and the jobs of 30,000 workers depend on this export business.

The Bundespost has long been criticised for adopting a restrictive approach—not only bv placing obstacles in the way of potential equipment suppliers, both bome-grown and foreign, but also by hindering the development of new services through customer initiative.

Shopping in Germany via mail order from an armchair in Camberley, England, using the Bildschirmtext via a telephone link-up. Special software for this system was developed by Systems Designers of Camberley.

On equipment supply, officials claim that all comers are free to apply to fulfil Bundespost needs. There have been indications of some liberalisation in equipment ordering, but the stringent, detailed specifications laid down in hefty volume still provide, in practice, a hurdle which is difficult to surmount.

Concerning new services, the Bundespost indicated some time ago it was considering allowing private customers to offer "value added" services, such as electronic mail. This could involve charges based on the usage of leased lines. But such ideas—which could strike at the nature of the telecommunications monopoly—have yet to bear fruit.

Herr Schwarz-Schilling has rejected suggestions that postal and telecommunications services should be split or that the Bundespost monopoly on these services should be ended. But he has explicitly given assurances that be wants to revitalise the vast organisation and give it, as far as possible, a business-like approach to prevent it hampering economic development.

Business executives are apt to grumble about Bundespost inefficiency, but there appears to he no real groundswell of opinion calling for a basic change in the nature of the monopoly.

The finances of the Bundespost present fewer headaches than, for example, the heavily loss-making railways, the Bundesbahn. However, questions must arise about medium and long-term finances, if the Bundespost is to push ahead with major investment plans on its own and particularly if Bildschirmtext fails to produce as rosy a picture as the Minister hopes.

The Bundespost is required to cover its costs from revenue, rather than rely on Government subsidies. Its returns to the government have more than doubled from DM 1.9bn in 1978 to DM 4bn last year.

But its net profit, after all burdens and transfers to reserves, has declined from a peak of DM 2.1bn in 1978 to DM 1.61bn in 1981 and DM 1.67bn last year. In addition, it increased its borrowing last year hy DM 3bn to DM 45.8bn.

Herr Schwarz-Schilling described last year's profit as "just about satisfactory" but noted that it fell short of achieving a market rate of return on capital.

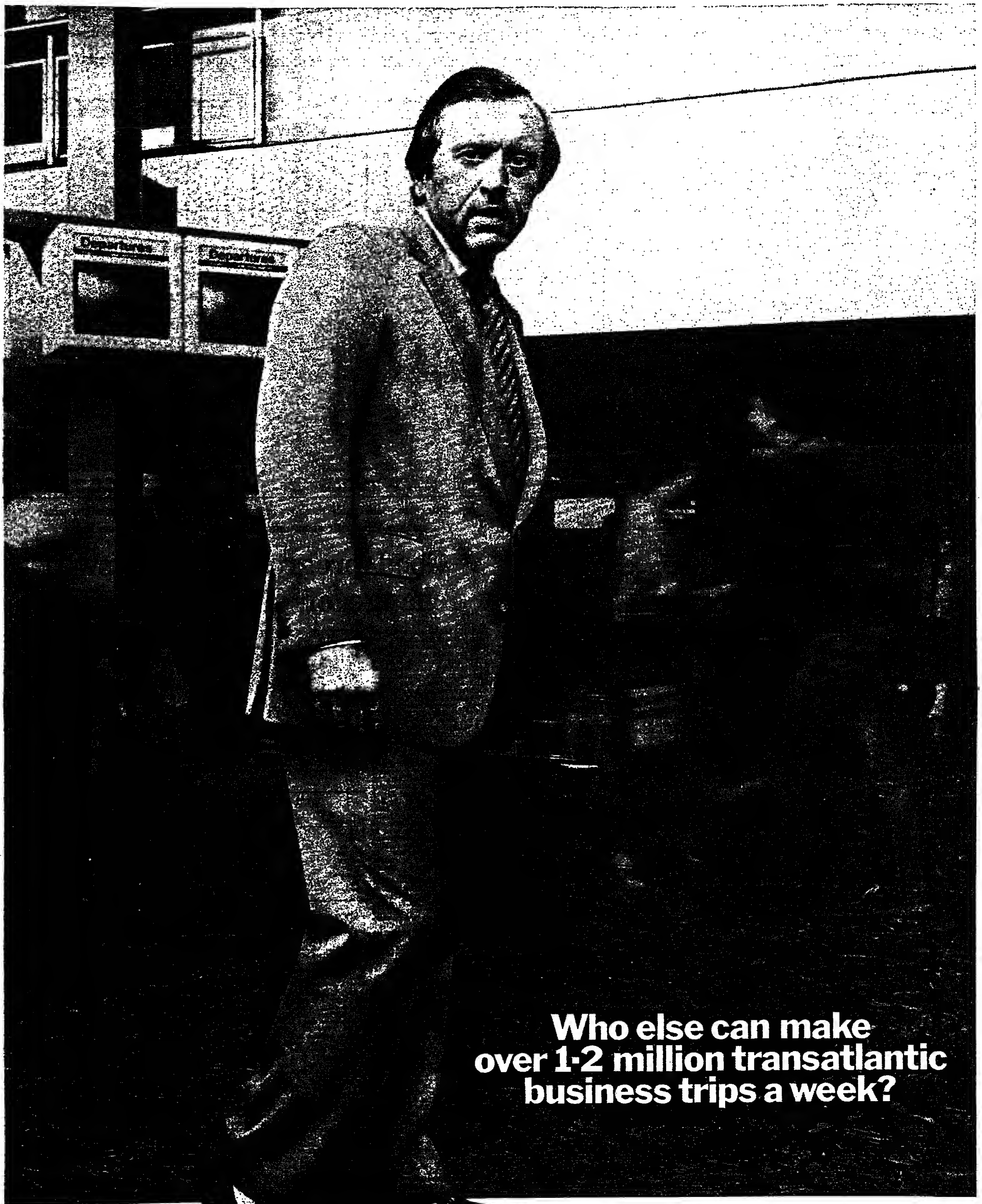
Nevertheless, he said he did not believe that the Bundespost would slip into the red in the foreseeable future and he dismissed thoughts of putting up postal or telephone charges for the time being.

At this stage, he remains an optimist about the earnings to come from new telecommunications services.

John Davies

DEVELOPMENT OF BUNDESPOST TELECOMMUNICATIONS BUSINESS

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Telephone lines (m)	11.7	12.4	13.1	14.5	16.0	17.6	19.2	20.9	22.1	23.0
Total handsets (m)	17.8	18.8	19.6	21.2	22.9	24.7	26.6	28.6	30.1	31.4
No. of calls (bn)	13.5	13.9	14.0	15.3	16.2	17.7	19.3	21.2	22.8	24.1
Telex connections (000)	99	103	106	111	116	123	131	139	145	151
Telegrammes (m)	11.5	10.5	9.4	9.0	8.7	8.2	7.9	7.6	7.1	6.1



BTI telecommunications are actually popping across the water over 7,000 times every hour of the day and night.

And they're flashing around the rest of the globe just as frequently.

These days, BTI can transmit your computer data, your plans, your diagrams, your messages, your telexes, your documents, even a live image of yourself (it's called 'Video Conferencing').

Oh yes, and your voice. Mustn't forget that.

What's more, many of these services are already available via your existing telephone lines so you won't have to accumulate a mountain of expensive hardware to handle everything.

If you'd like to know more about how BTI can help your business, contact Elaine Smith on 01-936 2617 for some jargon-free advice.

Or you could come and see us at "Telecom 83" in Geneva. (If you see you-know-who in the departure lounge, give him our regards.)

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The reorganisation of French telecommunications marks a new phase in the country's industrial policy, says **Paul Betts**

Massive shake-out under way in French sector

THE FRENCH telecommunications industry is undergoing a revolution. This follows the decision this autumn of the French Socialist Govarnmant to give the go-ahead to what is perhaps tha biggest reorganisation ever to ba undartaken by a European country of its telecommunications and electronics industry.

The centre pieca of this reorganisation is a major swap of industrial assets between Thomson and Compagnie Genarale d'Electricite (CGE), France's two leading nationalised alectronics conglomerates. Tha swap will see the creation of a new French telecommunications concern grouping together the telecommunications business of Thomson and CGE undar the control of CGE's subsidiary Cit-Alcatel. In turn, Thomson will take over control of CGE's electronic components business, its Sintra military division and its consumer electronics operation.

Target

Although this is the biggest restructuring ever to be undertaken in the French electronics sector, it is by no means the first in France, and is again largely dictated by economic necessities. While aimed at halting the financial haemorrhaga at Thomson, which lost FFr 2.2bn last year and is expected to report anothar loss this year, tha plan is also designed to give France a strongar position on tha international markats by creating a new telecommunications group on a world scale. This new group will have annual sales of about FFr 12bn and employ about 40,000 people. It will rank fifth in the world industry alongside the telecommunications oparations of tha likes of GTE of the U.S., Nippon Electric, Philips of the Natherlands, and Northern Telecom of Canada.

The reorganisation also marks a new phase in French industrial policy. Since last spring when M Laurent Fabius took charge of the industry ministry, Socialist industrial policy has significantly shifted towards a more market and internationalist approach. This raflects the changing fortunes of the French economy which is now undargoing a period of squeeze after the initial policies of reflation launched by the Socialists in 1981.

Under the circumstances, M Fabius was persuaded by the industrial arguments of M Alain Gomez, the chairman of Thomson, and M Georges Pebereau, the managing director of CGE. They argued that France's telecommunications industry could only remain competitive by a consolidation and rationalisation of resources. Moreover, despite a number of achievements in the telecommunications business, especially in the fields of telematics with the electronic telephone directory and in public digital switch technology, the results of the past years have on balance been disappointing for France.

The Socialist Government now hopes that this latest reorganisation will enable the country's electronics industry to becoma finally a springboard for domestic growth and international expansion. But by agreeing with the industrialists, the Government was forced to upset the French post and telecommunications authorities, the PTT. The PTT was vigorously opposed to tha Thomson-CGE asset swap. It has always fought tha idea of a French monopoly telecommunications supplier. In the middle of the last decada, when former President Giscard d'Estaing launched the ambitious programme to modernise the French telephone network, the Government decreed the need for two French suppliers. One was Cit-Alcatel, CGS's affiliate, and tha other Thomson, which in 1976 entered tha business by taking over an ITT French subsidiary and the French interests of Ericsson of Sweden.

Although the PTT hava been forced by the Government to accept tha latest plan, they have nonetheless continued to warn of the need for more than one supplier for the next genaration of public telaphone systems in France. Indeed, before the deal was approved by the Government, the PTT leaked a memorandum warning that a single domestic supplier could only provide about 65 per cent of French domestic needs. Two national suppliers, howevar, could provide about 90 per cent of the public market's requirements.

But the prospect, however tentative and distant, of the French public market opening up to foreign suppliers does not appear to worry CGE or Thomson. Even the Government has been placing the amphasis on international alliances and collaboration in the field of public telacommunications in recent weeks. Indeed, the French Government has submitted a long policy memorandum at the European Community Brussels calling for, among other things, "tha progresisva opening of public makets." This, the French Government claimed in tha mamorandum, was a condition of industrial efficiancy as long as this process was based on the principle of reciprocity and was resarved to EEC manufacturers.

For CGE, the merger of Thomson's telecommunications activities will now give its Cit-Alcatel subsidiary a stronger position to compete internationally and also give it the resources to devalop its next generation of local public exchanges.

Rivals

Alone, without substantial support from the state itself with its own cash problams, Cit-Alcatel feared it risked falling bahind its main rivals. With the Thomson deal and the concentration of resources around a singla manufacturer, Cit-Alcatel beliaves it can work on its next generation of public equipment, which by all accounts could involve investments of more than $1bn over a five-year period. This new generation would replace Cit-Alcatel's current E-10 public digital telephone exchange system which has mada it the world leader in this field in terms of sales and orders with more than 11m lines installed or ordered to date.

But CGE wants to see exports, currently accounting for about 30 per cent of Cit-Alcatel's sales, increase to 50 per cent of the total in the future. Growth will increasingly depend in coming years on international business, especially at a time when the French public telecommunications market is already past its peak.

Barely ten years ago, France only had 5m telephone lines installed. Now there are 21m lines installed and the target is 24m by 1986. But the big effort was mada a few years ago. In 1976, 2m lines were installed with the figure rising steadily to 2.7m lines in 1979 reaching a peak of 2.96m in 1980. In 1981 already the number was falling to 2.36m lines.

Moreover, the PTT have been asked to shoulder more and more of the burden of financing tha development of the country's overall electronics industry. With the PTT, which have been investing anoually about FFr 27bn, increasingly squeezed, the Government has been encouraging French groups to axport more and seek intarnational alliances to strengthen their international bases, both in Europe and in the key U.S. market.

Both CGE and Thomson believe the merger of their telecommunications interests will strengthen France's telecommunications industry's export position by preventing, among other things, damaging competition between the two groups for the same contract. The most notorious example was the recent case of an Egyptian telecommunications contract whare Cit-Alcatel was fighting fiercely against Thomson and Siemens. M Pebereau of CGE also argues the merger will strengthen his hand in negotiating alliances and collaboration deals with foreign manufacturers. Such cross-bordar alliances appear inevitable if the new merged telecommunications company is to become truly competitive.

The reorganisation, like past French electronics industry shake-ups, is expected to cause major disruptions in the industry in the short term at least. Tha merger is likely to have a tough impact for Thomson's telecommunications division. This division has just emerged from four difficult years of reorganisation and is about to be plunged into a new reorganisation just as it was beginning to get its act together. Although the division has been costing Thomson about FFr 400m a yaar in losses, its M-20 and M-25 public digital switch systems seemed to have started to overcome its initial difficulties while the telecommunications divisions also started coming out with a flow of new private telecommunications products.

Another controversial issue is tha fate of CGCT, the country's third telecommunications manufacturer. CGCT, tha ITT subsidiary nationalised by President Mitterrand, is by far the weakest of the three French companies. Recently, it agreed to a link up with Thomson in tha public switching business but now this deal is clearly uncertain following the much broadar Thomson-CGE industrial redeployment venture.

Support

Although the Socialist Government has said it would continue to support CGCT interests, the company appears doomed to be eventually absorbed by the new state telecommunications monolith. That is unless it can find some specific gaps in tha telecommunication market to develop its own industrial identity. This has been the case of the privata Jeumont-Schneider company, a subsidiary of the French Empain-Schneider conglomerate. Jeumont-Schneider has been developing smaller-scale digital axchanges largely designed for rural communities It has found an important market for this product in Africa.

FRANCE SUBSCRIBER MARKET: SOURCES OF SUPPLY

	Conditions of supply			Suppliers	
Equipment	PTT monopoly	PTT and approved agents	Approved agents	Suppliers to PTT	Major private suppliers
Telephone	●	●*		CGCT HPF Matra Telic-Alcatel Temat Thomson-CSF	(Numerous)
PABX and key systems		●†	●	Pleart-Lebas	CGE (Cit Alcatel) Jeumont Schneider Thomson CSF
Telex		●		Sagem Sintra	(not available)
Modems PSTN			●		TRT SAT LTT
Transpac Transmic	● ●			TRT SAT LTT	
Facsimile		●		Secre Thomson CSF	Cit Alcatel Nander Muirbead Thomson CSF 3M
Teletex		‡		—	—
Videotex		●		Matra Telic-Alcatel TRT	Matra Philips Telic Thomson CSF TRT

* Second telephone. † Key systems only. ‡ Expected conditions of supply. Source: Logica.

Olivetti is now Europe's leading manufacturer of data processing equipment, as well as being an important producer of telecommunications systems. Above: Olivetti's plant at Scarmagno

After near-bankruptcy three years ago, the Italian telecommunications sector makes a dramatic about-turn, as James Buxton reports from Rome

Good progress after a swift change of direction in Italy

THE ITALIAN telecommunications industry has come a long way in the past three years. Both the main stata telephone utility and its chief supplier have bounced back from near bankruptcy, new products are being developed and other manufacturers such as Olivetti are making progress.

The industry reached its nadir in about 1980. For several years the Government had refused to allow SIP, the state-controlled company which handles most of Italy's telephone traffic, to raise its tariffs adequately.

As its losses mountad it was unable to order new equipment from the state-owned company, Italtel (then called Sit-Siemens) whose turnover plunged 30 per cent in real terms in the five years between 1976 and 1980.

Both companies were badly run and highly inefficient, and Italy was falling far behind in terms of telecommunications technology. Italtel was making only halting progress in developing a second generation alectronic exchange named proteo.

Then, in ona of those swift changes of direction which Italy is capable of when disaster really does seem to threaten, the Government moved. In 1981, SIP received new managemant, was recapitalised, allowad to put its charges up and allotted a bigger share of the revenues of tba other state-controlled organisations which also provide telecommunications services in Italy.

Achievement

Italtel was also drastically shakan up. It received new funds and was given a new managing director, Sra Marisa B. Llisario, one of tha most dynamic women in Italian business today. She succeeded in cutting Italtel's labour force from 29,000 in 1980 to 23,700 by the end of 1982—no mean achievement in a state industry—and results began to improve.

Whereas in 1981 Italtel, which is based in Milan, made a loss of no less than L268bn on sales of L704bn, last year its loss had been cut to L120bn on sales which were 32 per cent higher, and this was mainly due to high financial charges, since the company recorded a gross operating margin of L135bn.

Salea of switching, transmission and othar equipment began to pick up as SIP resumed investing. Then, aftar much daliberation, Italtel decided on a way to proceed with the Proteo exchange, it formed a joint venture with the U.S. company, GTE, to davalop and market a range of Proteo exchange primarily in Italy, but also in parts of the world that do not have the North American standard.

Telettra, the telecommunications subsidiary of Fiat, also took a staka in tha consortium, known as Italcom. Tha first exchange, which is now known as Protal, is to be exhibited in praview at Telecom '83 in Ganeva.

The Govarnment also decidad that a second switching system should be adopted for Italy so that Italcom should not have a monopoly. It will be manufactured either by FATME, the Italian subsidiary or Ericsson, or face Standard, the Italian subsidiary of ITT.

So far, however, no decision has been made and tha future in Italy or whichever company fails to win the contract is not certain. Both companies could collaborate in producing tha chosen exchange.

But though the future of switching technology in Italy is now rather mora clear, there are still many problems.

SIP, after doing better for a time, now faces declining margins because sales are rising less fast than predicted and costs are exceeding estimates. This in itself is a threat to investment, but there is a further unresolved problem, which is crucial to the davelopment of telecommunications in Italy.

SIP, like Italtel, is a subsidiary of the IRI-Stet holding company. It operates telaphone services in Italian cities, handles some trunk calls and is the only interface between the public and tha various telephona services. It is, however, only a concessionary of the state, which has its own concern, named ASST, which is subject to the Ministry of Posts and Telecommunications, and which handles most of Italy's trunk connections.

Getting things right at Italtel: under dynamic new management, results have shown a dramatic improvement

ITALY SUBSCRIBER MARKET: SOURCES OF SUPPLY

Telephones*	Supply	Installation	Maintenance
PABX	SIP	SIP	SIP
Telex	Open	Supplier	SIP
	PTT (DCST)	PTT	PTT
Modems	SIP	SIP	SIP
Teletex	Open	Supplier	Supplier
Facsimile	Open	Supplier	Supplier
Videotex†	SIP	Supplier	Supplier

* Main instrument only. Additional instruments are available on the open market. † If a full service is introduced SIP may permit private supply. Source: Logica.

Confusion

The existence of two entities has always caused confusion and often led to poor service, especially as ASST is a government agency while SIP is a company in its own right and, therefore, allowed to pay more attractive salaries.

Most observars believe that Italy will never be able to make much progress in the development and introduction of new sarvices in the telematic field if the relationship between ASST and SIP is not changed, and this will hold up the manufacturing companies.

An interministerial decision in early 1982 dividad responsibility for the running of new services such as videotex and teletex between ASST and SIP—giving ASST responsibility for the primary network and SIP for tha secondary network, especially connections with customers.

Many people would consider such a division impractical, but the Government's decision further complicated matters by specifically assigning responsibility for most known new services to ASST.

That judgment of Solomon was supposed to have led to the signing of a new convention between SIP and ASST by the end of last year. But nothing happaned: the Ministar of Posts from last December to August this year decided that the answer was to have only one telecommunications utility.

Most people would agree with that, but he said that the utility should be a department of the PTT based on ASST, rathar than on tha company, SIP. That minister has now gone and a new one is now finding his way, with the matter still unresolved.

This administrative confusion, which is reminiscent of the inertia that brought Italian telecommunications to such a waak point in the late 1970s, is a serious threat to the introduction of new services, though these are also held up by uncertainties about the market for them in a country which is much less open to electronic innovation than, for example, Britain.

Even the traditional telex system is far less extensive than in other European countries, partly because of the inefficiencies of ASST, which handlas it.

In March, 1983, there were 51,600 subscribers and a backlog of 5,652 orders. Only now are the first electronic telex exchanges being installed.

Trials for services such as videotex, teletex and bureaufax are under way, under the control of both SIP and ASST, but the emphasis of both bodies at the moment is on raising the standard of the existing telephone and telex networks after the years of low investment.

Even if the prospects for national data networks and the equipment they require are still uncertain, Italian companies are stepping up production of other telecommunications products.

Italtel has set up a telematics subsidiary which makes equipment for data transmission, office automation and small PABXs. It is presenting at Geneva its products for transmitting in optical fibres, as well as its office 30 and office 100 PABXs.

A leader

Olivetti, now Europe's leading manufacturer of data processing equipment, is also an important maker of telecommunications equipment. It already has about 15 per cent of the world market for electromechanical telex machines.

As its office equipment has become more sophisticated as the electronic typewriter and distributed data processing, so the need for sophisticated telecommunications equipment to connect offices to the outside world has become more pressing.

The company, which is based at Ivrea, near Turin, makes facsimile equipment, video terminals, videotex equipment, and teletex. In West Germany, where teletex is already available, Olivetti has provided about 35 per cent of those terminals which are operating.

Olivetti's objective is to be able to offer its customers an integrated service in which telecommunications are simply the window on the outside world of other equipment.

Much of its equipment is made under licence: larger PABXs are mada under licence from the Canadian concern, Northern Telecom, and small ones under licence from Plessey of the UK.

Olivetti will be presenting at Geneva its small ICS 4000—which is designed for up to 64 users. It will also be displaying its facsimile and videotex terminals, modules for connecting telex and teletext to personal computers and other data processing equipment. Another range of products includes systems for private data networks, and electronic teleprinters with memory.

The other main Italian company in the telecommunications field, the Fiat subsidiary Telettra, is also stepping up its operations in telematics. It already makes some products for office automation and private networks, but has now just signed an agreement with Hewlett Packard of the U.S. under which it will co-operate in technical and commercial fields in Italy.

This will give Telettra access to Hewlett Packard's highly advanced products in this field, and enable Telettra to provide integrated systems for office automation and telecommunications.

The Future

The future of telecommunications rides on the promise of digital technology.

For the past century, virtually all communications—voice, data, graphics, image—was based on analog technology. The transmission and routing of all information was done in the form of electrical waves in varying amplitude and frequency.

In the 1960s, the introduction of computers to telecommunications networks increased the efficiency, flexibility, and capability of communications systems. But this was only an indication of the coming revolution.

Northern Telecom set off the revolution with an announcement in 1976. Applying its expertise in the key technologies of microelectronics and software, Northern Telecom became the first corporation to commit to the introduction of a complete family of fully digital switching and transmission telecommunications systems.

That commitment brought about the effective merger of the telecommunications and computer industries. Since then, every major telecommunications manufacturer in the world has followed Northern Telecom's announcement with their own. And, today, they continue to follow Northern Telecom's lead.

Northern Telecom's worldwide digital leadership is based on its commitment to research and development. The corporation annually spends more than nine percent of its revenues on R&D and has invested more than one billion dollars in R&D over the past decade.

Northern Telecom promised that our future would be a Digital World*. In fact...

and The Present.

It is delivering the future today with the broadest and most proven line of fully digital systems of any company in the world. Since the introduction of its first fully digital switch in 1975, organizations in 50 countries have put in service or ordered thousands of Northern Telecom's DMS or SL systems to serve the equivalent of more than 14 million telephone lines. No other company can match this record of global success and experience as a developer, manufacturer, and supplier of fully digital telecommunications systems.

Northern Telecom's customers include all major telephone companies across North America, including Bell Canada, AT&T and its operating companies, the specialized common carriers, the U.S. military, the health and hospitality industries, educational institutions, governments at all levels, banks and other financial organizations, businesses large and small, and government PTTs in Europe, the Middle East, Africa, Asia, the Caribbean, and Latin America.

Technology does not stand still. Northern Telecom is extending its leadership in digital telecommunications by developing new integrated circuits and software to evolve and enrich our proven systems. And we keep expanding our product families to serve our customers.

The modularity of our hardware and software enables us to evolve the capabilities of our systems. We avoid the potential of rapid obsolescence that has caused other companies to speak of their product "generations". We protect our customers' investments by evolving their systems with the progress of technology. By this, we set new performance standards as targets for our competitors to strive for.

These are the digital telecommunications products of tomorrow, available from Northern Telecom today:

DMS*
Central office switches route telephone calls within the network. Northern Telecom's DMS (Digital Multiplex Systems) Family comprises switches that can economically handle from a few dozen lines in a rural area to the sophisticated, high-capacity systems needed for as many as 100,000 telephone lines in cities.

The flexible design, dispersed processing, and remote modules that can be located away from the central switch, make it easy to expand an installed DMS switch as new capacity or features are required.

The first of Northern Telecom's computer-controlled, fully digital DMS switches were introduced in 1977. That's seven years of experience in developing, evolving, producing, installing, and servicing these sophisticated, compact, reliable, and cost-effective systems.

DMS-1
The Digital Multiplex Systems most widely used by telephone companies in rural areas. DMS-1 can serve up to 256 lines over just four pairs of wires. There are currently 2,000 DMS-1s in operation to provide thousands of telephone subscribers with economic, improved service. The DMS-1A, and a new system called the DMS-1 Urban, can handle 512 and 544 telephone lines, respectively.

DMS-10
DMS-10 can handle the needs of smaller communities requiring service for up to 8,000 telephone lines. The DMS-10M is a specially designed, compact version housed in a mobile cabinet on wheels. The packaged design virtually eliminates the need for engineering by telephone companies, permitting rapid and unassisted installation. DMS-10 also features Remote Equipment Modules to extend economically the capabilities of the central switch to surrounding areas.

More than 700 DMS-10s are in-service, including some 140 switches for 20 of AT&T's operating companies, and hundreds of other telephone companies across the U.S. and Canada, and in several other countries.

The DMS-100 Family
The flexibility of Northern Telecom's modular hardware and software architectures has enabled the corporation to modify its large digital switches to serve all the different roles in the telecommunications network, and to meet the special requirements of particular customer groups, new markets, or countries.

For example, Northern Telecom has licensed its DMS-100 Family technology to two Austrian manufacturers to develop switching systems for that country. The corporation also licensed this technology to a Turkish manufacturer to produce DMS switches for Turkey's PTT. Northern Telecom has developed special features required by the U.S. military, the specialized and resale common carrier industry, and for cellular mobile radio-telephone system operators. There are now some 550 DMS-100 Family switches in-service or on order.

Reflecting the quality, reliability, and availability of Northern Telecom's DMS, AT&T's telephone operating companies have become major customers for these systems. AT&T has recommended the DMS-1, DMS-10, DMS-100, DMS-200, and DMS-100/200 for use and has signed supply contracts with Northern Telecom. These contracts will be transferred to the operating companies when they are divested in 1984.

The DMS-100 Family of switches, when first introduced in 1979, offered about 300 features. Today, as new capabilities and members of the family have been added, the list of features is more than 1,000. And the total continues to grow while other manufacturers are still introducing their basic systems.

DMS-100 can meet the needs of larger communities and cities needing a big switch for local calling. DMS-100 can serve up to 100,000 telephone lines and, with its Remote Line Modules, can economically provide service to smaller communities in surrounding locations.

DMS-200 is a toll switch that can handle 60,000 trunks (long-distance) circuits.

DMS-100/200 is a large switch combining local and toll capabilities.

DMS-100 Scope Dial was developed to meet the special needs of the U.S. Air Force which chose Northern Telecom's switching for its Scope Dial program to modernize telecommunications on its bases around the world. DMS-100's very-large capacity, proven reliability, advanced digital switching architecture, and potential for significantly reducing telecommunications costs, meets the rigorous requirements of the U.S. military's upgraded Automatic Voice Network (Autovon) and the global military network for telephone service.

DMS-100 Scope Dial switches are now installed at the Vandenberg base in California; Osan, Korea; Wright Patterson, Ohio; Eielson, Alaska; Hill, Utah; and four more are on order or are being installed.

DMS-200 Autovon is a special configuration of Northern Telecom's toll switch to meet the demands of the U.S. Department of Defense, military departments, and other users in the Autovon military global communications network. Five DMS-200 Autovons have been installed in the U.S.

DMS-250 was developed for specialized and resale common carrier companies in the U.S. such as Satellite Business Systems and MCI Communications. It enables these companies to benefit from, and to offer their customers the benefits of, the Digital World.

DMS-300 is an example of Northern Telecom's experience in designing systems for international telecommunications. This large gateway switching system connects a country's telephone networks to the international telecommunications grid. DMS-300 is currently being used by Teleglobe Canada.

DMS MTX is the newest member of Northern Telecom's DMS Family. The DMS MTX (Mobile Telephone Exchange), introduced in 1983, is a part of the cellular mobile radio-telephone system being offered by Northern Telecom working with the General Electric Company in the U.S. As an example of the flexibility of DMS, customers who have already installed DMS-100, DMS-200, or SL-100 (large PBX) switches can add the cellular mobile radio-telephone capabilities to their existing systems.

TOPS* (Traffic Operator Position System) is a fully integrated, automated system for telephone operators that provides them with privacy, comfort, and ease of operation, and offers the telephone company considerable efficiencies and cost savings.

MAP* (Maintenance and Administration Position) is a unique capability offered as an integral part of the DMS-100 Family, comprising an intelligent terminal for use in communicating with the switch to analyze and diagnose its performance. MAP can examine the system from an entire frame to a portion of a telephone line card.

SL* Family
Northern Telecom's SL Family of digital business communications systems can meet the needs of organizations for 30 to 30,000 telephone lines. The corporation was the first to introduce integrated voice and data handling capability and has become the leading international supplier of digital PBXs and data packet switching systems.

The SL Family will serve as network controllers for voice, data, and other forms of information in Northern Telecom's OPEN (Open Protocol Enhanced Networks) World*, a program announced in late 1982 to provide new digital systems, features, and terminals for efficient information management systems. OPEN World will enable Northern Telecom's switching systems to connect the corporation's digital networks and terminals with networks and devices produced by other vendors, giving organizations the freedom to choose diverse systems that will most effectively meet their requirements for information handling.

SL-1
Northern Telecom's SL-1 PBXs can handle integrated voice and data requirements for small organizations needing as few as 30 telephone lines, to large businesses with up to 5,000 lines. The corporation is investing tens of millions of dollars annually to evolve and enhance the technology and capabilities of SL-1.

SL-1s are on order or in-service to handle 2.6 million telephone lines in 45 countries. Manufacturers in the United Kingdom, Sweden, Italy, and Korea have received licenses to manufacture and market SL-1.

SL-100
Larger organizations can benefit from Northern Telecom's advanced digital business communications systems technology by installing an SL-100. SL-100 can serve up to 30,000 telephone lines, making it the largest digital PBX available today. This PBX is based on Northern Telecom's proven DMS-100 system.

ESN
Northern Telecom's Electronic Switched Network (ESN), using SL-1 or SL-100, can link these PBXs and those of other manufacturers in sophisticated, cost-effective networks of 2 to 100 locations across the street or across a continent.

ESN's Communications Management Center (CMC) provides management with centralized control of its telecommunications network. CMC constantly records and analyzes telephone traffic, permitting changes to be made to the network as required. CMC's management features include user-billing and network-directory capability.

Other features, such as least-cost routing, can substantially reduce network costs by automatically finding the least expensive route for every call.

SL-10
The SL-10 bundles data in packets and digitally addresses and transmits the information at high speed with other users' data also bundled in packets. For most users, the elimination of the need for dedicated lines and charges only for transmission time used, can mean substantial savings.

SL-10 supports communications interfaces and protocols from many computer systems so that different machines in the network can communicate with one another. SL-10 networks are designed to grow as the need for data connections and traffic accelerate.

SL-10 forms the backbone of the Canadian Datapac and West German Datex-P networks. In the U.S., the Federal Reserve System uses an SL-10 network to handle funds transfers of more than $100 trillion per year. Other SL-10 users in the U.S. are Bankers Trust Company and Contel Network Inc. Internationally, SL-10s have been chosen for installations in the U.K., Hong Kong, Switzerland, Portugal, the Republic of Ireland, Belgium, and Austria.

Transmission Systems
Digital transmission systems are the threads which bind the Digital World. Transmission systems carry information between points. Voice or data is carried from the home, factory, or office, or between central office switches by copper wire, coaxial cable, radio, and glass fibers to the telephone company or private network switches, and routed to the caller's destination.

Increasingly, optoelectronic systems incorporating fiber optics and laser technology are being used to transmit simultaneous digital voice and data signals through the global telecommunications networks.

DE-4E
Channel banks facilitate a cost-effective and efficient transition to the Digital World. Front-end devices converting analog signals to digital and vice-versa, they make digital systems and products compatible with older generations of analog equipment.

Northern Telecom is the second largest manufacturer of channel banks in the world and the DE-4E is one of the most proven and reliable digital products available today.

PLC-1
Northern Telecom's Private Line Concentrator provides businesses and other organizations with the means to reduce dramatically the number of leased lines required in their voice communications networks, cutting line costs by as much as 50 percent. PLC-1 also provides network usage data for improved management of the network.

T1 Mini
A T1 Mini amplifies and regenerates voice and data signals as they are carried through the transmission systems. With its 24-channel capacity, the T1 Mini repeater is designed to meet AT&T specifications.

T1C
The T1 Mini's brother, the T1C has all the features of the smaller system with twice the capacity.

Digital Radio
Digital signals for voice, data, and video can be transmitted through the air. Northern Telecom's expanding family of digital radios currently includes 4ghz and 8ghz systems.

Optoelectronics
Northern Telecom has been developing and installing fiber optics systems since the early 1970s and continues to lead in advancing optoelectronic technology. We have supplied over 150 fiber optic transmission systems, the equivalent of more than 62,000 miles of fiber. Lightwave communication through glass fibers is practical and economical for voice, data, and video applications.

The successful application of fiber optics systems to digital telecommunications means longer transmission ranges of up to 30 miles without amplification by repeaters. Fewer repeaters means less field electronics, higher reliability and lower installation and maintenance costs. Glass fiber is smaller and lighter than conventional cable systems and is free from electromagnetic interference.

Northern Telecom offers complete optical fiber transmission systems, including single-mode and multimode fiber and compatible components and systems' designs custom-tailored to meet present and future customer requirements. In Saskatchewan, Canada, for example, Northern Telecom is working with Saskatchewan Telecommunications, the province's telephone company, to produce and install a 2,000-mile fiber optics network. This digital system is the longest fiber optics network being put in service, in the world. It will provide integrated voice, data, and video (cable television) services to customers over 100,000-square-miles.

For more information on Northern Telecom and its products contact: Northern Telecom (U.K.) Ltd. Langton House, Market St., Maidenhead, Berks., SL6 8BE Tel. (628) 72921.

northern telecom

*Trademark of Northern Telecom Limited

THE LARGEST SUPPLIER OF *FULLY* DIGITAL SWITCHING AND TRANSMISSION SYSTEMS IN THE WORLD. NORTHERN TELECOM HAS 37,000 EMPLOYEES, 46 MANUFACTURING PLANTS, AND 37 RESEARCH AND DEVELOPMENT CENTERS, IN BRAZIL, CANADA, ENGLAND, MALAYSIA, IRELAND, AND THE UNITED STATES. SALES OFFICES AND DISTRIBUTORS THROUGHOUT NORTH AMERICA, EUROPE, AND ASIA.

NORDIC COUNTRIES: Close co-operation exists in the region, with Sweden the leading light

Swedish expertise enjoys world ranking

WITH THE HIGHEST telephone penetration in the world, and some of the lowest tariffs in Europe, Sweden has for long held a leading position in the development of telecommunications. At the same time, in the shape of the L.M. Ericsson group, the country can boast a company which was among the first in the world to develop and instal an all-digital public switching system.

Since its introduction in 1977 Ericsson's AXE system has been adopted by more than 70 telephone administrations in 48 countries, and over 6m subscriber lines are already installed or on order. Pakistan is among the most important recent new customers.

Over the years a close co-operation has been built up in the Nordic region to co-ordinate the planning of the telecommunication services between the four Nordic countries. The co-operation was formalised in an agreement signed in 1980 by all four telecommunications administrations, but in practice the four states have been working closely together for much longer.

Some projects, certainly, have not always reflected such a great degree of harmony. The development of a joint telecommunications satellite has been the subject of years of wrangling, but Sweden, Norway and Finland at least appear now to have reached agreement to press ahead with the SwKr 1.5bn Tele-X project.

Satellite stake

At present, Sweden has an 85 per cent share and Norway 15 per cent, but it is expected that Finland too will take a small stake in the Tele-X satellite, opening the way for certain Finnish companies to become involved in the supply of equipment.

Satellite communication has been a major focus of co-ordinated research effort, and international satellite communications to the Nordic area are channelled through an earth station located on Sweden's west coast.

In common with several other countries, Sweden has moved in recent years to liberalise some areas of telecommunications and certain limited sectors were opened up to competition in late 1980s. The role of Televerket, the Swedish telecommunications administration, was modified somewhat during the previous non-Socialist government, but it still plays the central role in the development and introduction of new technology in Sweden.

Televerket has maintained the monopoly in the supply of all voice equipment including PABXs and modems for operation at speeds at over 1200 bit/s. It was also allowed to form a subsidiary Teleinvest to act as a holding company for all of its interests in areas where it competes with outside concerns.

Televerket overall was reorganised as long ago as 1975 when a great deal of decision-making was delegated to local areas. It is today acknowledged to have one of the highest levels of manpower productivity in Europe and one of the highest standards in terms of installation, repair times and maintenance standards.

In terms of overall equipment supply, Televerket holds still a very strong position and this is unlikely to be weakened by the current Social Democratic administration in Sweden which took over power 12 months ago, after an absence of six years. Apart from areas where it holds the monopoly, Televerket also competes very strongly in sectors where private supply is permitted too.

There is only muted criticism of Televerket's monopoly in the provision of telecommunication services and its monopoly over the supply of most types of equipment.

Televerket's subsidiary, Teleinvest, was formed as a response to the liberalisation of certain areas of telecommunications activities, in order to improve central administration's ability to compete in new sectors. Among the subsidiaries grouped in this new holding company are Swedtel, Swedcom, Teleindustrier, Telefinans, Tele-Larm and Nerion in Norway.

Swedtel is a telecommunications consultancy, chiefly doing business in the developing countries, while Swedcom (Swedish Telecoms Contracting) was formed just under three years ago to carry out contracts for the telecommunications administrations in other countries.

Status undecided

Still to be decided is the exact status of Televerket's factories in its industrial services division, but it is possible that they will become an operating company under the Teleinvest holding group despite opposition from the unions.

Among Televerket's other interests one of the most important is its 50 per cent-owned affiliate Ellemtel Utvecklings AB, the development company established jointly with L. M. Ericsson in 1970.

It is engaged in research, design and development and among other projects was responsible for developing the very successful AXE electronic telephone exchange.

According to Ericsson the AXE system is its most important means of competition and it claims that none of its rivals in Europe, Japan or the U.S. have nearly the same widespread acceptance for their modern systems. The introduction of the AXE system on the world market, followed by a number of system selections in its favour, has helped Ericsson to increase its share of the world telephone exchange market from less than 10 per cent at the beginning of the 1970s to around 13 per cent today.

With sales in 1982 of SwKr 19.6bn and 66,300 employees worldwide Ericsson is Sweden's sixth largest corporation. According to Grieveson Grant, the UK stockbrokers, in their recent investment analysis of Ericsson, the company's deliveries of AXE equipment should see a further sharp rise over the next two years.

In the process the larger part of exchange production in Ericsson's major overseas subsidiaries will switch over from electro-mechanical equipment to electronic with a saving of up to three quarters in actual production time. "The result should be a very rapid rise in profits on public telecommunications," says Grieveson Grant, even though it assumes that Ericsson's share of the world market will not expand much further after the rapid growth of recent years.

There has been a long history of co-operation between Ericsson and Televerket. In general terms, equipment developed by Ellemtel is manufactured for the telecommunications administration by its industrial services division, Teli, while Ericsson manufactures the same products for export markets.

In theory, there are opportunities for foreign manufacturers to supply equipment to Televerket, but in practice it buys only a very small proportion of its equipment abroad, and it comes under pressure from both the Government and the unions to buy Swedish wherever possible.

Kevin Done

SWEDEN SUBSCRIBER MARKET: SOURCES OF SUPPLY

Equipment Type	Manufacturer	Supplier	Installation	Maintenance
Telephones	PTT ('private')*	PTT	PTT	PTT
PABXs	PTT†	PTT	PTT	PTT
Telex Terminals	Private	PTT‡	PTT	PTT
Modems:				
i. Up to 1200 bit/s§	PTT+ private; Private	PTT; Private	Supplier	Supplier
ii. 1200 bit/s§	PTT	PTT	PTT	PTT
Facsimile Terminals	Private	PTT Private	Supplier	Supplier
Teletex Terminals	Private	PTT Private	Supplier	Supplier
Videotex Terminals	Private	Private	Supplier	Supplier

Notes:
* From December 1983, Televerket will supply two imported feature phones.
† Televerket makes one PABX under licence from a Canadian company.
‡ Teleprinters operating at 200 baud over leased circuits must be privately supplied.
§ 300 bit/s until July 1983.

Source: Logica.

Scanning a module in the ITT System 12 exchange (right). The system has been granted full technical approval by the Deutsche Bundespost—the first step towards its use in Germany's trunk communications network.

ITT describes System 12 as the most important in the group's history.

BELGIUM: Exports are the industry's lifeline

Timely export coup in deal with China

IN BELGIUM'S small but internationally successful telecommunications industry, they called Bell Telephone Manufacturing's $250m contract to supply its digital System 12 telephone switching system to China "the sale of the century." From start to finish, the deal took 10 years to negotiate and was won in the face of fierce international competition.

The turning point seems to have been a visit earlier this year by a Chinese delegation to Belgium, where it saw the Bell operation, a subsidiary of ITT.

"Besides showing the delegation that System 12 was already operational in the Belgian network, we also took them to our telecommunications plant at Geel. There the visitors could see with their own eyes that System 12 was already in volume production whereas our competitors stated that it was still only a concept maturing in the minds of our engineers," said Mr Eugene van Dyck, Bell's chairman. Though owned by ITT, Bell telephone manufacturing owes its name to American Telephone and Telegraph, which sold it in the 1920s.

The contract came at a handy time; conditions in the industry in recent months have not been easy. Fabrimetal, which groups together Belgium's mechanical and engineering industry, has noted that both orders and deliveries have been tailing off.

Slack investment

The reason is the universal one: the recession has caused a slackening in investment as public sector authorities, the main buyers of equipment, have tightened their belts.

In the first quarter of this year deliveries from the Belgian telecommunications were worth BFr 6.9bn, roughly identical to the level in the same period of 1982. Orders in the first quarter were BFr 6bn, which was 17 per cent down on the 1982 first quarter.

The order which Bell won in China reverses that tendency. Although the order will not necessarily attract other companies in the sector, it emphasises the importance of Bell in the Belgian industry. Bell, according to Fabrimetal, probably accounts for about half the business of the industry.

The contract also points up another significant factor about the Belgian industry. This is its dependence on foreign markets to survive. Bell itself has to export at least half of its production.

The Belgian domestic market is simply too small to take all the output of the sector. With Sweden this makes it an oddity among the major telecommunications equipment producers. Just over a quarter of Belgian output is sold internally, which means to Regie des Telephones et des Telegraphes (RTT).

By contrast 84 per cent of Italian output, 75 per cent of British output and 59 per cent of West German output are absorbed on the domestic markets. State consumers traditionally tend to favour the products of their domestic companies.

BELGIUM: RTT INVESTMENT
(BFr m)

Year	Investment	Borrowings	Own resources	% of own resources in total
1978	15,557.3	7,734.7	7,832.6	50.3
1979	14,944.5	5,670.2	9,274.3	62.1
1980	17,306.4	8,588.9	8,717.5	50.4
1981	18,020.1	9,575.2	8,444.9	46.9
1982	20,546.6	11,228.3	9,318.3	45.4

Belgium, though, has no huge multinational telecommunications group of its own, in the sense that West Germany can boast Siemens or the UK can boast GEC and Plessey. Indeed there is a strong international flavour among the companies in the sector.

Of the other principal companies located in Belgium, GTE ATEA is part of General Telephone and Electronics Corporation of the U.S., ACEC is an associate of Westinghouse of the U.S., Siemens and Philips are owned outside Belgium, and Agfa-Gevaert is owned by Bayer of West Germany.

These international links are long-standing. Bell, for example, set up operations in Antwerp over a century ago. It has been an integral part of Belgian industry in a sector which the Government is keen to foster as part of the drive to shift the traditional emphasis of Belgian industry away from the nineteenth century industries like steel and textiles.

The Bell contract in China was won in alliance with the Government, which not only played a diplomatic role in seeking an easing of U.S. restrictions on high technology exports from the West but also provided interest free credits to China.

The success of the companies in the export markets is at least influenced by the readiness of RTT, the state agency to invest in new equipment, providing export products with a working base.

Bell has orders and commitments, totalling 1.7m equivalent lines, from ten countries for its System 12, but the very first System 12 exchange was put into operation for RTT. GTE ATEA's new GTD5 computerised digital exchange has also been bought by RTT.

At the request of RTT, these two companies are working on the progressive digitalisation of the Belgian telecommunications system. This is a key part of the modernisation and development of the RTT system.

This year RTT is opening and then enlarging Telefax document transmission services. Next year it plans to open an automatic Teletex service and an electronic messenger service. The following year it will start a range of satellite services based on Telecom 1 and the European Communication System. The first optical fibre circuits come into operation on a small scale this year.

Such developments, although not individual to Belgium, are a natural response to the increased pressures being put on the RTT network. These pressures come through in RTT receipts.

Last year, telephone revenues were up 13 per cent on 1981 at BFrs 40.7bn, telex revenues were up 6 per cent at BrFs 3bn and data transmission receipts were up nearly 22 per cent at BFrs 1.1bn. Only telegraph revenues declined.

With a steadily increasing turnover, pushing towards BFrs 50bn last year, the RTT accounts for more than 1 per cent of the Belgian gross national product and for about 10 per cent of public investment.

Traditionally, this investment, running at BrFs 15bn this year, has been funded by RTT independently. The table shows that over a period it has managed to keep a rough balance between the use of its own resources for investment and borrowing on the capital markets.

For the first time this year, however, the Government has been prepared to put up public funds to encourage research and development. In September it decided to boost the investment budget by a further BFrs 2bn, directed especially at the digitalisation of the telephone network based on exchanges.

Regional basis

But this decision was not quite as simple as it looked, because the money has to be spent on a regional basis—BFrs 952m in Flanders, the Dutch speaking part of the country, BFrs 602m in Wallonia, the French-speaking part, and BFrs 446m in Brussels.

At the same time the Government decided to create a working group which would look at the whole question of how orders for the communications system would be spread between the three different areas of the country.

The linguistic and regional differences, which play a major role in Belgian politics are equally a live elements in the telecommunications sector. It is not immune from the growing pressure in Flanders to see that region's growing power, both in terms of the population and its politics and in its contribution to the national economy, reflected in the way national institutions place their orders.

There was a sharp reminder of the pitfalls which lie ahead for the RTT investment programme in September and October when the question of where an order for 12,000 telexes should be placed. The contenders were Siemens, based in Flanders, and ACEC, based in Wallonia. The solution was typically Belgian. Each company received 6,000 each.

Paul Cheeseright

SPAIN: A four-year plan envisages an expanding role for Telefonica

Chosen instrument in technology drive

SPAIN IS an oddity on the European scene in that the bulk of its telecommunications — including the telephone monopoly — is in the hands of a non-public-sector company.

Compania Telefonica Nacional de Espana, majority controlled by 700,000 private shareholders, is in terms of jobs the country's second largest enterprise after the railways, the biggest in terms of investment, added value, capitalisation, and —in stark contrast to the heavily loss-making state posts and telecommunications authority — profits.

Its real independence is, however, limited. The Government, which has 47 per cent in direct and indirect shareholdings, places representatives on the board and the chairmanship is a political appointment. The new chairman appointed after the Socialist election victory last year, Sr Luis Solana, is a brother of the Culture Minister — and compared to his predecessors an exception in not being a former Minister himself.

The "new style" announced by Sr Solana has been to reinforce Telefonica's role as an instrument of industrial policy. Legally the company is not bound by clear obligations to the state other than to provide telephone services and a large annual slice in taxes. However, Sr Solana has made it clear that the authorities intend the company to be "an authentic locomotive" for industry, particularly in new technologies.

Telefonica holds the monopoly not only for phones but also for data transmission. Its purchases account for roughly four-fifths of the business of the sector, for which the Socialist Party in its election programme promised "decisive support to those segments of the market in which it is possible to create a competitive national industry."

Spain's telecommunications industry is protectionist by nature and Telefonica has been committed to buying Spanish ever since it started as a subsidiary of ITT in the 1920s. At present Spanish industry, including its own subsidiaries and affiliates, make up about 90 per cent of its purchases. It therefore comprises the only sector of Spanish electronics without a trade deficit.

This insistence on home-produced supplies has often meant that Spain has held on to old technology longer than necessary. However, current policies point to a more forceful role in building up advanced technology sectors, geared to export in cases where the national market is too small to justify the outlay, in order to maintain production and jobs.

A clear instance is the recent accord reached with the ITT group after the Government rejected plans to cut over 6,000 jobs. Under the proposed plan Telefonica, which is a 20 per cent shareholder in ITT's Standard Electrica subsidiary, is committed to stepping up its purchases from the group, which fell off as a result of slower growth in the mainstream telephone business. This is designed to save 1,000 jobs, and Telefonica is to find jobs for another 900. What the Spanish side wants out of the deal is for ITT to transfer more high-tech production to Spain—thereby keeping on a further 2,000 of its workforce—and export from there, including to the U.S.

Telefonica's interests include joint ventures with the Italian Telettra group and Sweden's Ericsson (Intelsa). It recently took over the only wholly Spanish-owned company in the sector, the number-six-ranking Amper, a loss-making producer of telephone sets which has made a big effort in research.

Final stages

A four-year plan for 1983-86, expected to involve investments of Pta 800bn ($5.3bn at current rates) is in the final stages of preparation by the company. This is the first time such a plan has been drawn up in concert with the sector's companies, unions and users, and the first time that Telefonica—acting on the example of public sector counterparts in other European countries — has brought other companies into its strategy.

Projects are to be categorised in four lists—those that Telefonica is to carry out on its own, those on which it will collaborate with other interests, those which it will contract out and those it hopes other companies will develop on their own.

Telefonica will take on an extended role in determining standards and will provide large-scale testing facilities for outside enterprises. The company's research effort last year, Pta 1.5bn ($100m), backed up by Pta 3bn among its suppliers, was proportionately well below that of other major European countries. It is now investing up to Pta 3bn on a new research centre and plans to spend Pta 5bn a year running it.

The programme sets the main lines for development of technology (with priority given to microelectrics and software), products (notably terminals) and services.

These plans include public telefax and teletex services. The latter, for which a pilot service is under way, will use Spain's Iberpac package data network as main carrier. This network, which started in 1971, was the first public shared service of its kind in Europe. Initially based on Honeywell computers but now employing hardware from Secoinsa, a joint venture between Fujitsu of Japan, Telefonica and INI, the Spanish state holding company.

As for videotex, Spain launched a pilot scheme in time for last year's World Cup but is wary about over-estimating the potential public demand. As a result, operating plans have been put back, with a service initially limited to businesses due to start next autumn.

Development in optical fibres has been limited, Spain's existing cable network being relatively new, although four experimental links are in operation.

Investment by Telefonica, expected to be around $1.1bn this year, has levelled off after sharp growth in the early 1970s. Its biggest telephone exchange, in Madrid, was blown up by the Basque ETA group in April last year, ahead of the World Cup, and is still being repaired. The cost of the damage—put last year at Pta 3.2bn—was almost twice what the company spent on special communications for the Cup.

Emphasis switched

Emphasis has switched to the profitable growth areas of telematics and data transmission, compensating for the slack in expansion of its telephone business. This slowdown is a symptom of recession rather than of saturation. With 34 phones per 100 inhabitants at the end of last year, Spain is still very under-equipped by European standards. Expansion rates have fallen since 1981 to under five per cent a year, less than half of what they were for most of the 1970s.

One of the few direct Government roles (apart from the telex service) is control of tariffs. This is a sore point with Telefonica because of regular delays in approving changes. It adds to the problems posed by the company's lack — in comparison with its European counterparts—of self-financing capacity, by the increasing peseta cost of its foreign debt and by high interest rates.

In justifying this year's increases the company has marshalled as arguments not just the usual cost considerations but also the extra responsibilities it has taken on as an industrial driving force.

David White

SPAIN SUBSCIBER MARKET: SOURCES OF SUPPLY

Equipment	Supply	Installation	Maintenance
Telephones	CTNE	CTNE	CTNE
Telex	Open	CyT	Open
PABX*	Open	Open	Open
Modems	CTNE	CTNE	CTNE
Teletex	Open	Open	Open
Facsimile*	Open	Open	Open
Videotex	Open	Open	Open

Note: * De facto monopoly by CTNE subsidiary Cosesa.

Source: Logica.

NETHERLANDS: Big—albeit controversial—changes are in prospect

Moves to privatise much of network

BIG CHANGES are in prospect for the Dutch telecommunications industry. The Government in the Hague is expected to announce proposals within the next 12 months which should result in the privatisation of much of the network.

A report has already been prepared by Mr Jaap Scherpenhuizen, the state secretary for telecommunications and the top management of the Dutch PTT. This is now being considered by officials of the economics, finance and telecommunications ministries, before being presented to a Cabinet information committee under the chairmanship of Mr Ruud Lubbers, the Dutch Premier.

Mr Sherpenhuizen said last month that the PTT's monopoly of the network would in future be confined to telephone apparatus and infrastructure. Private concerns, he said, would be able to compete openly in the non-telephonic sectors, particularly in the latest, high-technology areas.

The latest report follows a discussion paper produced 18 months ago by a committee under Mr Frans Swarttouw, chairman of Fokker, the Dutch aerospace group, which had urged widespread privatisation and a severing of the existing links between the PTT and the Government.

Mr Scherpenhuizen does not accept Mr Swarttouw's argument that the PTT should become independent, but does accept that the idea could be re-examined in a few years' time.

The outgoing head of the PTT, Mr Philip Leenman, who retires next April, said recently that the importance of an effective infrastructure for communications, in the widest sense of the word, was so great that the privatising of vital PTT sectors, such as posts and telecommunications, must be ruled out.

Mr Cor Wit, the incoming director-general, is more mild in his criticism of the Swarttouw report. Much of it, he says, could be acted on but telephone equipment must remain a state monopoly, partly to ensure the continuing efficiency of the service and partly to safeguard the jobs of 27,000 employees.

Potential flood

Mr Wit's expressed concern over a potential flood of cheap East bloc telephones and "Mickey Mouse phones from Taiwan" appears not to have fallen on deaf ears within the Government. Mr Scherpenhuizen's clear dislike of any opening up in this area is bound to disappoint commercial manufacturers of hand-dial sets, but the big money in the end is likely to be in the satellite and computer-based alternative communications systems, and here, at least, the gates are almost certain to be opened.

The alliance between the PTT and the Government over telephones is not surprising. The state industry is protecting its own corner, while the Government is seeking to hold on to a growing volume of revenue. This year, the PTT is expected to contribute just under Fl 1bn to the Dutch treasury, while in 1984 the sum should rise to Fl 1.2bn.

Much of this comes from the operation of the telephone system, and it is understandable that the Government should not wish to give it up. Mr Wit knows how strong this argument is and has referred to the PTT as a "milch cow" of the state.

Over the next decade, however, as satellite and computer technology introduce new possibilities outside the telephone system, it is likely that these two sectors will grow in the potential they have for profit. What the PTT will be left with — assuming the Cabinet approves Mr Scherpenhuizen's position—is a guaranteed telephone market, a share of other systems and care and maintenance of the land infrastructure.

It is not an unenviable position. Holland's existing telephone system is highly automated and efficient, with equipment bought from all over the world. "I never buy in the Netherlands if it is cheaper somewhere else," Mr Leenman said recently. Naturally, Philips, the Eindhoven-based electronics giant, plays a key role in the Dutch telecommunications industry, but it is by no means the only supplier, and competition for Dutch PTT orders can often be intense.

In 1984, the PTT intends expanding and updating semi-electronic exchanges in a number of cities, including Rotterdam and The Hague. Glass fibre cables are to be laid in Rotterdam, and there will be Dutch involvement in the laying of a new fibre cable between Britain and Belgium, to be operational by 1986.

Two new satellite ground stations are to be established next year at Burum, in Friesland, to add to the two already there, and there will be Dutch participation, to a value of Fl 30m, in a European project to establish a new communications satellite over the Indian Ocean.

NETHERLANDS SUBSCRIBER MARKET: SOURCES OF SUPPLY

Equipment	Conditions of supply: PTT monopoly	PTT and approved agents	Approved agents	Suppliers: Suppliers to PTT	Private suppliers
Telephone	●			Ericsson, Krone, NSEM (ITT)	—
PABX and key system	●			Ericsson, GTE/ATE, Philips, Telfenbau and Normalzeit	—
Telex	●			Philips, Siemens	—
Message switches and telex interfaces		●		Philips	Datapoint, ITS, ITT, Kouwigen Hartman, Philips, Racal, Siemens
Modems: PSTN and LC			●	—	(Numerous)
Datanet 1	●			(Numerous)	—
Dabas	●			(Numerous)	—
Euronet	●			(Numerous)	—
Facsimile		●		NEC, 3M	Canon, Kalle Infotec, Rank Xerox, Siemens, 3M
Teletex		●		(Not known)	(Expected to include: Ericsson, Olivetti, Olympia, Philips, Siemens, Triumph Adler)
Videotex		●		Epson (printer), Philips, Siemens	(Not available)

Source: Logica

CONTINUED ON NEXT PAGE

WORLD TELECOMMUNICATIONS XV

Daring technical innovation leads to success for Northern Telecom, as **Nicholas Hirst** reports

Canada emerges as world supplier

IN THE last few years Canada has emerged as a leading supplier to the world market for telecommunications systems. Two companies dominate the Canadian scene, Northern Telecom and Mitel.

Northern Telecom, 53 per cent owned by Bell Canada Enterprises, the controlling group of the largest telephone operating company in Canada, has become the second largest telecommunications equipment manufacturer in North America, beaten only by Western Electric, and the sixth largest in the world.

Its sales last year topped C$3bn, twice the level five years ago.

Mitel, which in 1975, had sales of only C$300,000 last year had revenues of more than C$250m and with around 13 per cent of the highly competitive U.S. market for private branch exchanges is running neck and neck with Rolm of California.

The success of Northern Telecom has been built on daring technical innovation and a strong home base. Canada is the second largest country in the world and spreads across four time zones. As Mr Richard Stursberg, director of Strategic Planning at the Federal Department of Communications put it: "Telecommunications is as central to holding the country together as railways were in the last century."

In 1976, just 100 years after Alexander Graham Bell, the Scots inventor who emigrated to Canada, patented the telephone, Northern Telecom, supported by its parent company, made the decision to try and steal a march on the competition and produce a full range of new generation digital telephone exchanges.

Northern Telecom was bringing up-to-the-minute computer technology to the telephone business. It was a gamble. From a level of C$33m in 1973 Northern Telecom's research and development spending had risen to C$241.4m in 1982 for a total of C$1.05bn with the majority going on digital technology.

It has paid off. Net income in the first half of this year was up 80 per cent at C$109.8m before an extraordinary gain in spite of a depressed Canadian market. Northern Telecom has become the darling of the Toronto Stock Exchange, with its shares rising to a high point recently of C$60⅝ from C$27¼ earlier in the year after a one for three split.

Competitors such as the Swedish L. M. Ericsson; ITT and Western Electric are now trying to catch up.

"I don't think any one of the main manufacturers comes anywhere close to Northern Telecom," said Mr Francis McInerney of Northern Business Information of telecommunications industry research organisation based in New York.

Mr Walter Light, chairman and chief executive of Northern Telecom says the company now has a two- to three-year technological lead. It has fully digital public and private exchanges serving 14m telephone lines in 50 countries, but the biggest market is the U.S.

Northern Telecom broke into the AT&T market in 1980 when the giant American telephone group approved the sale of its DMS-10 small local exchange to Bell operating companies.

A new four-year contract was signed in June this year for Northern Telecom's larger DMS-100 family of large digital exchanges and toll switches.

With sales of transmissions systems AT&T and the Bell operating companies are *now Northern Telecom's* largest customers in the U.S.

Analysts believe that with the divestiture of AT&T's operating companies next year, Northern Telecom will be in an even stronger position to increase sales.

Sales in the U.S. now account for 55 per cent of the total compared with 32 per cent in Canada and the balance from other countries. Conversion to digital by companies in the Bell system has been slow with only 2 per cent of AT & T's total lines using digital switching compared with 19 per cent for the independents. But while sales to the Bell system offer scope for growth, Northern Telecom is increasingly looking to overseas markets.

In August, Northern Telecom signed a C$300m five-year contract to supply digital switching systems to Turkey and, on October 6, announced a C$12.9m investment in the UK to take advantage of the opening up of the British Telecommunications market.

Mr Light told a press conference: "Orders we have received for our digital switching systems from some 50 countries are just the beginning. We expect to be viewed as more aggressive in tha future."

While Northern Telecom has been going from strength to strength, Mitel has been running into problems. In contrast to Northern Telecom'a strong share performance, Mitel has slumped from a high this year to C$37¼ to a low of C$15⅝ and continues to trade around that level.

The first blow came in June when it announced it would not be continuing its partnership with IBM to develop a new line of switching systems.

IBM hed chosen competitor, Rolm, instead. Then, in July, Mitel announced its first-ever quarterly loss of C$4.5m and then a further loss of C$3.5m was reported for the second quarter compared with a profit of C$4.4m in the corresponding period.

Mitel is saying it will make a profit for the year as a whole, but its fast growth image has been badly tarnished

Marketing of its first family of fully digital switches, the SX-2000 superswitch is a year late. And even the company's public relations co-ordinator, Diane Daghofer said: "We have had a reputation of talking a bit too early and a bit too brashly ebout our products."

Much is riding on the future of the SX-2000. In the year to February, 1982, out of deferred development costs of C$14m, 70 per cent were related to development of the SX-2000.

In the private branch exchange market digital equipment is growing fastest. Mitel is now planning to introduce a stripped-down version of its superswitch later this year with limited capability for data transmission.

Full volume production of the stripped down version will begin in the spring and the full system should be available a year later.

Analysts say Mitel expanded too fast with too many manufacturing facilities around the world and under-estimated the difficulties of developing a large digital switching system, but that it is now attempting to get its operations under control.

New appointment

A new chief operating office has been appointed and the company has ceased development of its Skyswitch, e satellite communications switching system and closed its semiconductor manufacturing plant in Vermont at a cost of C$1.3m.

Elsewhere, analysts are eagerly waiting to see what the American Tie Communications does with Plessey Canada, sold by its British parent in June.

Tie Communication is regarded as one of the best marketeers of "key systems" — switchboards for the small business market — in North America.

Plessey engineers had developed a small, highly flexible private branch exchange called the K2 which some analysts believe could become an extremely successful product, especially when backed by Tie's expertise.

Meanwhile, the Canadian domestic communications market is in a state of flux. Canadian regulatory authorities allowed Bell Cenada to re-organise itself earlier this year setting up a new holding company, Bell Canada Enterprises.

Its telephone-operating company, Bell Canada, remains regulated by the Canadian Radio-Television and Telecommunications Commission, but profits from other divisions will no longer be taken into account in approving its rate structure. This leaves the group free to compete on the international market without the fear thet profits it earns will end up subsidising Canedian telephone users.

In July, Bell raised C$336m by offering 12.6m shares to help it take advantage of new opportunities.

At the beginning of May, it had announced a new C$1 6bn five-year contract to manage Seudi Arabia's telephone service. Bell Canada International now has 35 projects in 20 countries.

Bell and provincial telephone companies outside of its operating area of Quebec and Ontario retain a monopoly of public voice transmissions, but this seems likely to change.

Mr Francis Fox, the Communications Minister, told a House of Commons committee in May that his department intended to move to a competitive rather than a regulated environment. This could allow long distance discount operators to enter the market as they have in the U.S.

Regulation, however, is divided between Federal and provincial authorities and any changes to the present system could be vigorously fought.

What worries the Department of Communication is that if the Canadian telephone market is not opened up to free competition, business users could begin to route their calls through the U.S. where a competitive market exists.

Netherlands move to privatise much of the network

CONTINUED FROM PREVIOUS PAGE

Last month, initial tests began of a Dutch text communications system, known as Democom, by means of which messages can be exchanged and recorded along glass fibre connections. Public testing of the system, involving some 750 subscribers, is to start in the New Year.

In total, the PTT will invest around Fl 2.9bn in 1984—Fl 50m more than this year. Naturally, the postal service will account for part of this total, but the bulk will be in the field of telecommunications.

Glass fibre is already becoming a reality in the telecommunications field in Holland. In a few months time, two main telephone exchanges in Rotterdam will be joined by the new product. NKF-Kabel, a subsidiary of Philips, is providing both the fibre and the special welding equipment required to effect the links.

The PTT believes that glass fibre is already a viable system over short distances and believes that by the 1990s a complete network will have been established. Traditional co-axial cable systems have to be boosted approximately every three kilometres. Glass fibre can carry information over 25 kilometres without trouble.

Dominating Dutch telecommunications is, of course, Philips, which on August 1 this year signed a joint venture agreement with AT&T of the U.S. covering activities in the fields of public telephone switching and transmission. Initially at least, the focus will be on the AT&T digital switching centre. The American corporation will provide the basic product, while Philips will contribute marketing and specific development for different customers. The joint venture workforce will eventually reach 5,000 at its Dutch headquarters, and there are high hopes that lucrative contracts round the world can be secured by this pooling of knowledge and experience.

Philips has already proven, along with Ericsson of Sweden that it can produce the goods on a large-scale. The Philips-Ericsson joint venture is currently installing a vast, sophisticated telecommunications network for Saudi Arabia, worth some Fl 14bn.

Philips is also active in transmission systems purely of its own development, such as the new 565 MBIT/S coaxial line system and the 140 MBIT/S repeaterless monomide optical fibre system operable over 40 kilometres. Through Pye its UK subsidiary, it is engaged in cellular mobile radio, and its new Sophonet wide area office automation and data handling system is expected to be a significant money-spinner.

Philips' telex systems are already widely used in the Netherlands, and the new Pact telex terminal features powerful memory and message editing functions and a high-resolution bi-directional printer.

In 1971, Rotterdam opened the first computer-controlled telephone exchange in the world. This system has since been improved, and electronic automation has spread throughout the country. Push-button dialling from city-centre call-boxes is increasingly common, and the latest generation of phone booths will be connected to a toll-free information service instead of being supplied with costly and instantly out-of-date telephone books. Many telexes are now electronic, and this trend in increasing. View-data is available on a general basis, and a packet-switched Datel service for large users was introduced in 1980.

Set to grow

With a partial deregulation of tha PTT clearly on the way, the market for private services is clearly set to grow. The compact nature of the country is bound to limit development in one area. Vast distances at least for internal communications traffic, are never covered in the Netherlands and cordless telephones are frowned on by the Government as liable to create chaos in the dense Dutch system. Otherwise, it's all systems go.

The main areas likely to be open to free competition in the future are computer-based. View-data, the information-handling service based on a central computer and client units, is already a free area, supervised by the PTT and using its land-lines. But the system (known generically as videotex), is expanding, and a nationwida network of services is envisaged for later in the decade.

Teletex, the high speed, multi-function follow-up to Telex, is another system that is set to expand fast in the Netherlands, and once again it is forseen that private enterprise will be heavily involved. Computer and word-processor link-ups, both nationally and internationally, are intended as the end-result of Teletex, and while the PTT, or another single body, would continue to provide the information transportation, the provision of equipment and systems would be open to competition.

The leasing of lines and of bulk capacity is more controversial. Neither the Government nor the PTT are believed to favour the leasing of lines that could then be sub-leased (re-sale). However, there is some discussion of re-sale being permitted if the sub-leased line provides an enhanced service, possibly linked to word-processing or computers.

The Centrum Voor Informatie Beleid (CIB), an industry-sponsored lobby group frequently consulted by the Government, believes that "cream-skimming" — the provision of low-cost telephone lines on a sub-lease basis — can be prevented if value-added services are made a condition of the sale.

CIB experts consider that the Dutch telecommunications industry has stood still for too long, and that the time for a change in direction has arrived now that the national network is rapidly being updated by digital and other electronic means. It agrees that the basic telephone and telex systems and the infrastructure must remain regulated — although not necessarily by the PTT — but wants to see private enterprise providing much more of the customer's equipment and services.

ASIA: The demands of the community as a whole, including the poorest, cannot be overlooked says **Dinah Lee**

Rapid growth for fast data transmission

FAST AND flexible methods of data communication, once the preserve of multinational companies, is quickly becoming one of Asia's fastest growing industries, increasingly aimed at medium and small business operations as well as the giants.

However, communications experts taking advantage of Asia's phenomenal growth, cannot overlook the demands of the general community which includes the very poorest. In this regard, few contrasts could be greater than in Hong Kong where free telephones are still readily available to pedestrians stopping at fast-food counters and local shops and, at the same time, the Hong Kong Telephone Company could boast, until recently, the world's largest urban optical fibre network of approximately 3,000 fibre-km installed

This claim was only recently superseded by Buenos Aires which bought a larger system wholesale.

"You often see the most modern systems in developing countries that can buy the latest and the best available," said the assistant general manager of Hong Kong Telephone Company, Mr Brian Kennedy.

He described the race to dominate Hong Kong's growing market as highly competitive.

"We are threatening the telex market and they don't like it," be said wben describing the telephone company's two-year data message service.

Developed

Using existent phone lines, the DMS system offers customers wbat the industry calls "store and forward" services.

Instead of using a telex machine, a DMS customer transmits his message over the telephone line with the help of a "modem" attachment to the lelepbone company's computer from which it is shot to a computer in the U.S., UK, Tel Aviv or South Africa.

The system as employed in Hong Kong was developed in a joint venture with a company in Tel Aviv, Argamon, and introduced two years ago.

Mr Kennedy claims that it cuts telex costs by 25 per cent for transmission to the U.S. and UK, be adds that rivals for the market, Cable and Wireless, tried to delay a licence for DMS by protesting that it would infringe their licence as the British colony's telegram and telex monopoly.

He said that not surprisingly, both Kokusai Denshin Denwa Company (KDD), the Japanese international carrier and Nippon Telepbone and Telegraph public corporation (NTT) the holder of the Japanese Monopoly on domestic communications are equally protective of their markets.

The main attractions of the DMS system to users is the fact that the pbone syatem is already installed and office workers can prepare messages on word processors, far easler than punching a telex tape. What makes the calls faster and cheaper, is the telephone company's "packet switching system" which sends the data at speeds around 4,800 haud. (A "baud" is a unit of telegraphic signalling speed, corresponding to one dot per second, and named after a French engineer, Baudot.)

The signal is also faster because one message can be piggy-backed on to the minute gaps in another transmission, called "multi-plexing."

One of the drawbacks to the DMS system is that it isn't "interactive" so two parties cannot chat back and forth as they can on a Telex. But for Hong Kong customers merely waiting for telex time to China, the capability of DMS to send the message whenever possible by multi-plexing or along different transmission routes, is a godsend.

Another drawback is the system's dependence on the clarity of the telepbone line, particularly difficult to count on from countries like Malaysia, Thailand, the Philippines or Indonesia.

To a certain extent, the line can be specially conditioned to filter out static but other systems guarantee fewer "corruptions" of the message.

Despite these problems, Hong Kong telepbone has said it hopes that DMS will have captured 40 per cent of Hong Kong's telex market in a few years' time.

Last year, that market was 85.2m lelex minutes, and is expected to grow by 10-15 per cent a year or more.

Cable and Wireless has introduced only in September their competitor — Dialcom — which they claim is error-free, using wbat is called "parity and flow control." to catch typographical errors introduced in transmission.

Using a microprocessor terminal, a customer "keys" into his "electronic mailbox" with his secret password and can store, aend or retrieve material. For this reason it is called a "store and retrieve" system.

"We see our system as keeping telex business off the phone lines. We think the phone lines are for conversations," said Cable and Wireless' Asia-Pacific sales manager, Mr Jim Carman.

The Cable and Wireless system also uses a "packet switching system" to speed messages, and like the DMS system is highly adaptable to most microprocessors available in Hong Kong's competitive and varied computer market.

Dialcom can send messages from Hong Kong to the U.S., Australia, and Canada, the installation costs HK60 dollars and it costs 80 cents a minute for "connect time" when the central computer is in use.

There are approximately 42,000 customers in the U.S., 34,000 in Canada.

At the moment, Cable and Wireless are negotiating to extend the service to Korea, Manila and Taiwan. It is operated in Hong Kong under licence to Dialcom in the U.S.

Both of these systems enable the user to receive information as well as send or plug into other commercial data transmission systems like viewdata or the Reuters finance wire. However, neither system publishes a directory which means that a sender into Dialcom or DMS must know the addressec's code, or number.

Interestingly, in a region where the dominant languages for anything besides international business are Japanese, Mandarin or Cantonese Chinese, none of them cope with the problem of transmitting ideographs, as well as old-fashioned slow facsimile transmission.

Therefore, Japan's facsimile market still grows faster than anywhere else in the world.

Although "fax" cannot be edited or manipulaled as easily as messages on a word processor, tbe Japanese do not seem to mind since so much more of their business communication is handwritten.

What is more, Cable and Wireless charges are cheaper than KDD's, so many customers with multiple lines roule through Hopg Kong, rather than Tokyo, e.g. companies in Korea, Nevertheless, KDD say that 40 per cent of overseas 'phone calls are data (not voice) messages and 90 per cent of those are facsimile.

At the same time, Hong Kong Telephone Company is working on three separate projects to develop a Chinese transmission service, one with Sun Hung Kai Research, one with the Chinese University of Hong Kong and one in-house project.

Cable and Wireless has been using for some time a computerised translation service for their telegram service interpreting numbers for characters and vice versa.

Hong Kong and the South East Asia region in general is likely to continue to grow in this direction, largely because of its growing financial importance, coupled with the ewkward time zone.

If message can be stored, delayed, retieved, sped up and generally treated as instantaneous conversations wilhout the worry of cost or length, Asian businessmen can literally do their business in lheir sleep.

The Cable and Wireless earth satellite station in Hong Kong: facing competition in one of the world's fastest-growing markets

Japan is under intense pressure to increase purchases abroad, reports **Roy Garner**

Tokyo anxious for early settlement

WITH THE days fast ticking away before President Reagan visits Japan in early November, the Japanese government is becoming increasingly anxious that some form of early settlement can be achieved over a key bi-lateral trade issue; purchases of foreign equipment by the nation's telecommunications monopoly, the Nippon Telegraph and Telephone Public Corporation (NTT).

NTT's annual procurements of telecommunications equipment are worth around Y3bn yet, despite efforts on both the foreign and Japanese sides over the past three years, foreign goods purchases still acconnt for only around 2 per cent of this total.

The failure of foreign companies to gain a respectable foothold in the NTT market threatens not only to aggravate the strains caused by the overall U.S. trade deficit, which this year is expected to amount to approximately $20bn (not to mention the UK deficit, which reached £1.015bn in Jan-May 1983), but it also puts in jeopardy the proposed renewal of a three-year lelecommunications market opening agreement, signed in 1981, which is due to expire in December. The agreement is of a reciprocal nature, allowing Japanese telecomms. equipment makers the valuable privilege of non-discriminatory access to U.S. contracts, and although some people would be happy to see Japan's market return to its previous closed state, most Japanese industry leaders, together with the Government, are anxious to see the agreement renewed.

Pressure from the U.S. and Europe over the opening up of NTT to foreign goods purchases first came to a bead in lale 1980. At that time NTT was still pursuing a strictly buy-Japanese policy, obtaining its equipment needs from the "NTT family" of favoured domestic makers.

Independent

Three years of discussions on the NTT issue, first raised in the Tokvo round of the General Agreement on Tariffs and Trade (GATT), preceded the agreement finally concluded in 1981. Japan always insisted that the liberalisation of NTT purchases copld not be handled within the scope of the GATT free procurement pact, and instead settled for the present deal which treats it as an independent free trade issue.

NTT purchasing procedures are divided into three different "tracks," each relevant to specific types of telecomms. products. During the past three years NTT's foreign purchases under track I have included digital PBX equipment and magnetic tapes for data telecommunications, while under the track II and track III procednres it has bought a satellite echo canceller, pocket belt pagers and microwave antennae.

Offshore procurement under the new agreement amounted to approximately $36m by 1982, and NTT said it expected the sum to double annually at a minimum. Aware that this figure still looks paltry when set against the $3bn of its overall yearly purchases, NTT announced this October that it is to buy other foreign equipment, worth $89.3m, thus boosting the sum of contracts awarded to some $140m for the fiscal year 1983, equivalent to a quadrupling of purchases since the previous year. The purchase total announced, however, includes a $21m Cray Research Inc. supercomputer, whicb is arguably not a telecomms. product.

Other purchases include a $64m communications traffic control system from A.T.&T. Inc and a $4.3m transportable digital switching system from Northern Telecom Inc.

The Japanese argue that they have done everything possible to enable foreign companies to bid for NTT contracts on an equal footing. These moves have included the acceptance of applications filed in English, and registered at NTT offices abroad. NTT has also sent delegations to the U.S. to explain the nature of NTT procurements and bidding proceedures to telecomms makers, and to encourage their participation. The Japanese complain that although these import promotion seminars have been beld in U.S. cities, few representatives from lhe U.S. telecomms companles bothered to turn up, a fact not denied by the U.S. side.

They view the current NTT debate as being conducled primarily on a political level, while on the business level NTT, as a buyer, feels it is in an unnatural position in having to develop interest among potential salesmen.

Unfair advantage

The U.S. answer these charges of apparent apathy on the part of its mannfacturers by claiming that NTT's long history of exclusivity has led smaller U.S. makers to conclude the market cannot reward the effort required for its successful penetration.

The U.S. also claims that Japanese companies retain an unfair advantage in NTT business through their ready access to its basic research projects, and is demanding that its makers be allowed to participate in these NTT research ventures, as a means of ensuring their goods will be of marketable specifications.

Several U.S. companies already in Japan, end committed to the acquisition of NTT business, have seen good results, and the chief problem now lies in encouraging the smaller U.S. manufacturers to invest in the Japanese market.

Rolm Corporation, for example, beat both Japanese and foreign makers to become the first company to gain NTT type approval for digital PBX equipment. The company did $3m worth of business in its first year of Jepan sales, end expects to double this figure for each of the next four or five years.

Paradyne Corporation also recently won a major NTT order for its PIX II modems, and has since entered a joint venture with a Japanese software services company.

The next big issue in the telecommunications business promises to centre on Japan's domestic satellite services. Overseas companies are willing to enter into technology transfer deals, and to share business, with the big Japanese suppliers in this field, but both the Japanese companies and the government are clearly not interested in the idea.

Japan's telecommunications market seems destined to remain a controversial trade issue for some time to come, and especially so when, as at present, and in 1980, a U.S. Presidential election campaign is looming into view.